Early Journal Content on JSTOR, Free to Anyone in the World

This article is one of nearly 500,000 scholarly works digitized and made freely available to everyone in the world by JSTOR.

Known as the Early Journal Content, this set of works include research articles, news, letters, and other writings published in more than 200 of the oldest leading academic journals. The works date from the mid-seventeenth to the early twentieth centuries.

We encourage people to read and share the Early Journal Content openly and to tell others that this resource exists. People may post this content online or redistribute in any way for non-commercial purposes.

Read more about Early Journal Content at http://about.jstor.org/participate-jstor/individuals/early-journal-content.

JSTOR is a digital library of academic journals, books, and primary source objects. JSTOR helps people discover, use, and build upon a wide range of content through a powerful research and teaching platform, and preserves this content for future generations. JSTOR is part of ITHAKA, a not-for-profit organization that also includes Ithaka S+R and Portico. For more information about JSTOR, please contact support@jstor.org.

XIX. *Journal of a Voyage to* The East Indies, *in the Ship* Grenv

Communicated b

EXPLANATION OF THE COLUMNS.

1st, THE *date*[a].

2d, The *height* of the *thermometer*, according to FAHRENHEIT's therm[om]eter belonged to Mr. RUSSELL, and hung in the open air in the balco

3d, including four columns, contains the *register* of the *marine barom* which, as well as the thermometers, were made by NAIRNE and BLUNT: t R and D are quicksilver, of the kind usually made by them. That marked S is of quicksilver, and of a lighter fluid, for the purpose of making the alte visible, which is a very great convenience at sea; a quicksilver thermometer b it for the sake of correcting its height, the heat by which is set down in marked Th. next to that marked S.

4th, The *weather* and *winds* in four lines; 1st line from noon to 6 P.M 6 P.M. to midnight; 3d, from midnight to 6 A.M.; 4th, from 6 A.M. to noon.

In the column of *weather*, f. denotes *fair*; sq. *squally*; c. *cloudy*; h. *hazy*; *hard rain*; sr. *small rain*; dr. r. *drizling rain*; sh. *showers*; th. *thunder*; l. *lightn*

It is proper to remark, that the *winds* are set down according to the *compass*, allowance for the *Variation*.

5th in 2, The *difference* between the daily alteration of *latitude* by *accou vation*; N. denoting that the *observation* was to the *Northward* of the *accoun* was to the *Southward*[b].

(a) Here, for want of room, the day of the month only is expressed; but in the original journal the days of the Moon, are also inserted.

(b) Next to these columns in the original journal are the following, which are left out here only for want o
Correct course, lee-way variation &c. allowed, and the different courses reduced to one straight course.
Distance on that straight course.
Difference of latitude by account,
Difference of latitude by observation,
The departure,
The difference of longitude by account,
The difference of longitude by the time-keeper,
} in minutes of a degree.

aſt Indies, *in the Ship* Grenville, *Captain* Burnet Abercrombie, *in the Year* 1775. *B*
Communicated by the Honourable Henry Cavendiſh, *F. R. S.*

Read January 29, 1778.

THE COLUMNS.

according to FAHRENHEIT's ſcale. This
in the open air in the balcony.
egiſter of the *marine barometers*, all of
e by NAIRNE and BLUNT: thoſe marked
by them. That marked S is compounded
purpoſe of making the alterations more
a quickſilver thermometer being fixed to
t by which is ſet down in the column

ſt line from noon to 6 P.M.; 2d, from
; 4th, from 6 A.M. to noon.
ſqually; c. *cloudy*; h. *hazy*; r. *rain*; hr.
owers; th. *thunder*; l. *lightning*.
wn according to the *compaſs*, without any

eration of *latitude* by *account* and *obſer-*
ne *Northward* of the *account*; S. that it

ed; but in the original journal the days of the week, and

which are left out here only for want of room:
nt courſes reduced to one ſtraight courſe.

minutes of a degree.

6th in 2, The *difference* between the
time-keeper; W. denoting that the *long*
account; E. that it was to the *Eaſtward*.

The reſult of thoſe differences ind
error in the courſe ſailed, or diſtance run
from what it really was.

7th, The *longitude* from Greenwich, i
1ſt, The longitude by *account*.
2d, The longitude by the *time-ke*
his late improvements.
3d, The *difference* between the *lo*
and from the *time-keeper uncor*
Eaſt of ; w. denoting time-ke
keeper not to be liable to any ſ
preciſion with which the obſerv
ſtances of weather and of the ſh
4th, The *longitude* by *obſervatio*
adjuſted, by the log, to the noon
5th, The number of *ſights* or *diſtan*
6th, The *object* whoſe *diſtance* fro
* the Star; S. Spica Virginis; R
F. Fomalhaut; An. Antares.
7th, The *extreme difference* betwee
minutes of a degree; when the
above is taken, *otherwiſe* the nex
8th, The *latitude* in two columns:
1ſt, The latitude by *account*, carr
longitude by *account*.

nbie, *in the Year* 1775. *By* Alexander Dalrymple, *Esq. F. R. S.*
endish, *F. R. S.*

The *difference* between the daily alteration of *longitude* by the *account* and W. denoting that the *longitude* by the *time-keeper* was to the *Westward* of that it was to the *Eastward.*

lt of those differences indicates the daily effect of current; however an course sailed, or distance run by log, would make the current appear different t really was.

longitude from Greenwich, in seven columns.

ae longitude by *account.*

ne longitude by the *time-keeper*, which was made by ARNOLD, but without late improvements.

he *difference* between the *longitudes* deduced from *observations* of the *Moon* from the *time-keeper uncorrected*; E. denoting the time-keeper to be to the t of ☾; W. denoting time-keeper to West of ☾. This, admitting the *time-er* not to be liable to any sudden changes in its rate of going, indicates the cision with which the observations of the Moon may be relied on, all circum-ces of weather and of the ship's motion considered.

The *longitude* by *observations* of the *Moon's distance* from the *Sun* or *Stars*, usted, by the log, to the noon nearest the time of observation.

he number of *sights* or *distances observed.*

he *object* whose *distance* from the *Moon* was *observed*; ☉ denoting the Sun; ne Star; S. Spica Virginis; R. Regulus; A. Aldebaran; At. Atair; P. Pollux; Fomalhaut; An. Antares.

he *extreme difference* between the *highest* and *lowest observation*; expressed in utes of a degree; when the *seconds* amount to *more* than 30, the next minute *ve* is taken, *otherwise* the next minute *below.*

latitude in two columns:

he latitude by *account*, carried on from the *land*, in the same manner as the *itude* by *account.*

2 2d,

2d, The latitude by *observation*; and where the *latitude* could not be l
vation, it is deduced by *account* from the *last observation*, in whi
included within [ ].

9th, The *correct longitude* from Greenwich deduced from the *time-kee*
by the *sight* of *lands*, whereof the *longitudes* are known, and by *observations* c
taking a *mean* of the several observations of the *Moon* made within a short pe
other. The *error* of the *time-keeper*, between the *longitude corrected* by *sigh*
observations of the *Moon*, is supposed to have arisen by the *time-keeper* havin
rate of going *uniformly* between these observations; and the *intermediate l*
determined by the *time-keeper* on this supposition. Where no observations
were made, it is deduced by the account from the *last* observation of th
is then included within [ ].

10th, The *magnetical observations* of the *variation* and *dip*, in seven colum
1st, 2d, The variation by azimuth, amplitude, * *before*, denoting the observation to h
the *morning*; * *after*, denoting the ob
have been in the *evening*. The *variation* was observed by the offic
compasses belonging to the ship.

3d, The *dip* with the *face* of the *instrument* to the East.

4th, Ditto, ditto, ditto, West.

5th, The *mean dip* of the foregoing observations.

6th, The *mean corrected*, or what is *supposed* to be the *true dip*.

7th, The *circumstances* under which the *observations* of the *dip* were mad

12th, The *miles* run by *log*.

The *dip* was observed with a *dipping-needle* belonging to the hon. Mr.
made by SISSON.

The following *remarks* on the *dipping-needle* and *observations* are by Mr. CA

The ends of the axis of the dipping-needle are made conical, and turn in c
of bell-metal, in the manner of Mr. LORIMER's needle, described in Phil. Tra
p. 79. The dip was constantly observed both with the face of the instrumen
and to the West, and the poles were changed twice during the voyage, in
whether the needle continued well balanced. The use of this method of
explained in Phil. Trans. vol. LXVI. p. 396.

the *latitude* could not be had by *obser-*
the *last observation*, in which case it is

deduced from the *time-keeper corrected*
known, and by *observations* of the *Moon*,
Moon made within a short period of each
he *longitude corrected* by *sight of land* or
sen by the *time-keeper* having altered its
ons; and the *intermediate longitudes* are
on. Where no observations of the *time*
the *last* observation of the *time*, and

ation and *dip*, in seven columns.
noting the observation to have been in
; * *after*, denoting the observation to
on was observed by the officers with the

to the East.
West.
itions.
to be the *true dip*.
ervations of the *dip* were made.

belonging to the hon. Mr. CAVENDISH,

nd *observations* are by Mr. CAVENDISH.
made conical, and turn in conical holes
eedle, described in Phil. Transf. vol. LXV.
h the face of the instrument to the East
wice during the voyage, in order to see
The use of this method of observing is

The mean dip corrected is what is sup
correction is as follows.

By the observations on July 12th, w
marked end of the needle was too hea
too low at that place; and therefore, if
strong in all parts of the earth, the err
$\frac{15}{16}$ths of a degree as the cosine of the dip
the poles were changed at Suez, agree w
all the observations the marked end of
all that part of the voyage subsequent to

$\frac{4}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, $\frac{7}{8}$ of a degree from the mean dip, when the mean dip is between

But as before the needle left London,
difference in the dip, the correction in th
great, *videlicet*;

$\frac{1}{8}$, $\frac{2}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, $\frac{7}{8}$ of a degree is subtr
dip, when tha

The dip was observed on board the Gr
part of the ship in which the observation
more than 5′ from that observed with the
about five miles distant; so that the obs
much influenced by the iron-work of the

n dip corrected is what is ſuppoſed to be the *true dip.* The foundation of this
s as follows.

bſervations on July 12th, when the poles were changed, it appears, that the
of the needle was too heavy, ſo as to make that end point $\frac{15}{16}$ths of a degree
hat place; and therefore, if we ſuppoſe that the force of magnetiſm is equally
l parts of the earth, the error produced thereby in other places ſhould be to
egree as the coſine of the dip to the radius. The obſervations alſo made when
ere changed at Suez, agree well enough with this ſuppoſition: therefore, as in
rvations the marked end of the needle pointed to the North, the mean dip in
of the voyage ſubſequent to July 12th is corrected by ſubtracting

degree from the mean dip,	63° and	52°	North, and adding as much when
n the mean dip is between	52	43	the dip is as much South.
	43	30	
	30	0	

fore the needle left London, changing the poles was found to make very little
the dip, the correction in the preceding part of the voyage is made not ſo
et;

$\frac{1}{8}$, $\frac{2}{8}$, $\frac{3}{8}$, $\frac{4}{8}$, $\frac{5}{8}$, $\frac{6}{8}$, $\frac{7}{8}$ of a degree is ſubtracted from the mean dip, when that dip is between	70° and	62°	
	62	52	
	52	43	
	43	35	
	35	30	
	30	25	
	25	0	

vas obſerved on board the Grenville at Deptford, after her return, in the ſame
hip in which the obſervations were uſually made, and was found not to differ
′ from that obſerved with the ſame needle in a pretty large garden in London,
iles diſtant; ſo that the obſervations on board the Grenville ſeem to be not
nced by the iron-work of the ſhip.

A Journal

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D.L A.O. N	D.L A.O. S	D.L A.T.K. W	D.L A.T.K. E	Longitude A.
	°	In.Dec.	In.Dec	°	In.Dec.		′	′	′	′	° ′ W
Apr. 28						f. h. f. SE. ESE. S by E. E by S. ESE. SE.					
29						f.h. SE.V.WbS.WSW.SWbW.SW.WSW.V.C.V.WSW.					
30			30.2½	55		h. r. SW by S. WSW W. h. WNW. NW by W. h. r. WNW. C. NNW. r. f. NNW. NW by N. NW.		6		7	6.19
May 1	59		30.4½	61		f. NW by N. NW by W. WNW. f. NW by W. NW. f. WNW. W by N. f. W. WSW. W by S.		11		14	6.40
2	57			56		h. fr. WSW. SW by W. hr. r. SW by S. SW. W by S. r. h. fr. W. WNW. h. r. f. h. NW by W. WNW. NW by W.		9	33		7.22
3	54¾		30.0⅓	54		c. NW by N. C. c. C. c. C. E. c. h. E. E by N.					7.29
4	56½		30.0¾	56¼		h. ENE. h. ENE. h. c. ENE. V. c. NE. V. C.		31	9		7.57
5	57½		30.0	57½		h. C. W by S. c. h. W. WSW. SW. h. r. SW. WSW. h. fr. c. W by S. WSW. NE by N.		13		7	7.13
6	55¾		30.2	55½		h. N. NNE. h. NNE. NE. ENE. h. c. ENE. ESE. E by N. c. f. E by N. E by S.		19		12	8.36
7	57		30.2¼	56½		f. ESE. f. E. f. E. f. E. E by N. ENE.		21	4		10.13
8	61¼		30.2¾	60¼		h. NE by E. NNE. h. NNE. h. NNE. h. NNE. NE.		39	13		10.22

e Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* ALE

	D.L A.O. N	D.L A.O. S	D.L A. T.K. W	D.L A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D. ☽ T.K.	Longitude from Greenwich ☽	S.	O.	E D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical Dip Face E.	Magnetical Dip Face W.	Magnetical Dip MD
	′	′	′	′	°W′	°W′	′W	°W′			′	°N′	°N′	°W′	°W′	′W°	°	°	°
ESE. SE.													49.43				72.4	73.6	73.1
V.V.C.V.WSW.													49.50	5.35			72.4	73.7	73.1
. NW.		6		7	6.19	6.12						49.25	49.19	6.12			73.	74.	73.4
. WNW.		11		14	6.40	6.19						48.42	48.25	6.19			72.	73.4	72.6
S. NW by W.		9	33		7.22	7.34						48.51	48.43	7.34			72.4	73.	72.6
					7.29							48.34	[48.26]	[7.41]			72.	72.4	72.2
		31	9																
					7.57	8.18						47.51	47.20	8.18			71.4	72.6	72.1
by N.		13		7	7.13	7.27						46.56	46.12	7.27			71.	72.4	71.6
		19		12	8.36	8.38						45.58	44.55	8.38		18.42*	71.	72.	71.
		21	4		10.13	10.19						44.14	42.50	10.19			69.6	71.	70.
		39	13		10.22	10.43	3 14	10.40 10 29	4 4	⊙	27 46	41.52	40. 9	10.43			68.4	69.2	68

	Magnetical								
	Variation.		Dip						
			Face						
g.	Az.	Amp.	E.	W.	MD.	C.D.		ML.	N. B. Log-line 51 feet to 29″¼.
′	°W′	′W°	°	°	°	°			
			72.4	73.6	73.1	73.1			Between Ram-head and the Lizard.
35			72.4	73.7	73.1	73.1			Lizard Point E½N=ENE½N. 7 or 8 leagues off shore.
2			73.	74.	73.4	73.4	Great swell.	37	At 1 P.M the Lizard Point bore by compass E½N. Variation allowed ENE½N 7 leagues. The Land's End N by E=NbyW. Take a departure from the Lizard in 49° 57′ 30″ N lat. Long. 5° 15′ W. First and middle part, lights airs and calm. Latter, pleasant breezes. Great swell from W.
9			72.	73.4	72.6	72.6		51	Light breezes; great swell from Westward.
34			72.4	73.	72.6	72.6	Great swell.	47	Major part light breezes; great swell from Westward.
41]			72.	72.4	72.2	72.2		18	Mostly calm. A very large swell from Westward.
8			71.4	72.6	72.1	72.1	Very steady.	48	Light breezes and a great swell.
27			71.	72.4	71.6	71.6	Great motion.	68	First part, calm. Middle, an increasing breeze from Westward, with rain. Latter, a fine breeze from the Northward.
38		18.42*	71.	72.	71.4	71.4	Good deal of motion.	83	Mostly light breezes, with a swell from NW.
19			69.6	71.	70.3	70.3	Very steady.	126	An increasing gale from the Eastward.
43			68.4	69.2	68.7	68.6	Ditto.	142	First part, fresh gales. Latter, moderate.
								620	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitu A.
	°	In. Dec.	In. Dec.	°	In. Dec.		′	′	′	′	° ′
May 9	67		30.1¼	67		f. NNE. f. h. NNE. h. NNE. E by S. h. E by S. V.		11		13	W 10.34
10	68		30.0½	67¾		h. ENE. NE. V. h. V. N by E. h. N. V. h. V. SE by E. ESE. SE.		4	19		11.7
11						f. SE by S. C. f. C. ENE. E. f. h. E. NE by E. C. h. V. C.		10	9		11.28
12	67½		30.3¾	67½		h. NW by W. WNW. NW. h. c. NW by W. f. h. V. NW by W. h. NW by W. C. W by N. W.		16		4	11.52
13	66¼	30.1	30.0¾	66	30.1	f. W by S. WNW. f. h. WNW. NW by W. NW. h. NW. NW by N. c. NNE. N.		21	9		12.35
14	65	30.2½	30.2¼	65¼	30.2½	fq. h. NE by N. h. NNE. N. fq. c. N. c. N. NNE.		20		8	15.0
15	67¾		30.2	67½		h. NNE. f. c. NNE. NE by N. fq. c. NE by N. NE. W by N. c. WNW. C. W.		25	14		15.59
16	65½	30.1½	30.1½	65½	30.0½	c. W. c. W. V. NE by E. c. NE by E. E by N. h. E by N.	2			7	By acct from Madeira in [16.50] 16 56
17	67½		30.1¾	67¼		h. NE. h. c. NE by E. c. E by N. E by S. c. E by N. ESE.		18	2		17.3

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	Longitude from Greenwich D. ☾ T.K.	Longitude from Greenwich ☾	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical Dip Face E.	Magnetical Dip Face W.	Magnetical Dip MD
	′	′	′	′	° ′ W	° ′ W	′ E	° ′ W				° ′ N	° ′ N	° ′ W	° ′ W	° ′ W	°	°	°
		11		13	10.34	10.42	13	10.55	3	⊙	36	40.17	38.24	10.42	18.0*	17.43*	67.6	69.	68.
SE.		4	19		11.7	11.34						39.26	37.33	11.34	20 38*	18.36*	67.2	68.4	67.
		10	9		11.28	12.4						39. 3	37.0	12. 4	20. 9*	19 57*	66.6	67.6	67.
NW. y N. W.		16		4	11.52	12.24						38.28	36. 9	12.24			65.6	67.2	66.
NW.		21	9		12.35	13.16						37.46	35. 6	13.16	20.17*	20.38*	66.	67.	66.
		20		8	15.0	15.33						36.36	33.30	15.33	19.28*	19.16*	64.6	65.6	65.
y N.		25	14		15.59	16.46						35.50	[32.24]	16.46			64.2	65.6	65.
	2			7	By acct from Madeira in [16.50] 16 56	16.41						31.18	31.20	16.41			63.2	64.6	64.
		18	2		17.3	16.50						29 57	29.41	16.50			62.2	63.6	63.

CROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

r. ng.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical Dip Face E.	Magnetical Dip Face W.	Magnetical Dip MD.	Magnetical Dip C.D.		ML.	
′	° ′	° ′	°	°	°	°		620	
42	W 18.0*	W 17.43*	67.6	69.	68.3	68.2	Very steady.	96	Decreasing breezes. Changed log-line 48 feet to 29 7/12.
34	20 38*	18.36*	67.2	68.4	67.7	67.6	Good deal of motion.	55	Most part light airs. Several small land birds; two of them, supposed nightingales came on board, very tired; also saw a hawk.
4	20. 9*	19 57*	66.6	67.6	67.2	67.1	Ship yawing.	29	Light airs of wind Easterly, with calms. Some swallows and other land birds, who seem very tired. In the afternoon, during the calm, when the ship's head was to the Southwestward, there was, for a little time, a counter current visible; it made like a wake on the ship's larboard beam, as if she was going broadside foremost.
24			65.6	67.2	66.4	66.3	Ditto, needle very steady.	41	Light airs of wind throughout. P.M. saw two three-mast vessels with latine sails; they were supposed to be Barbary cruizers, but did not come near enough to let us know what they were. Some swallows about the ship.
16	20.17*	20.38*	66.	67.	66.4	66.3	Ditto, needle very unsteady, bad observation.	62	An increasing breeze from the Northward. In the morning there were many petrils in the ship's wake: they continued throughout the day.
33	19.28*	19.16*	64.6	65.6	65.2	65.1	Very steady.	138	Fresh breezes, with some squalls. At noon saw Porto Santo from the mast-head, W by S. per compass.
46			64.2	65.6	65.	64.7		84	In *Funchal* road. Major SEARS informed us, that Mr. SEARL, in consequence of our request, tried the therm. for 10′ in a cool cellar, and found it 68°. N. B. Captain ALCOCK informed me, he observed the therm. on May 14, 1776, at 6 A.M. at *Funchal* 68°, and in the cellar 61°: and Mr. SEARL wrote to Mr. CAVENDISH, that on the 16th of May the therm. which stood at 69°, was carried down at 1 P.M. to a cellar, where it remained till 4 o'clock, and then was found to be at 62°, so that Major SEARS's account was probably erroneous.
41			63.2	64.6	64.	63.7		67	First part, light airs. Middle and latter, pleasant breezes and smooth weather; several boats came off from *Funchal*.
50			62.2	63.6	63.	62.7		81	These 24 hours pleasant breeze from Eastward.
								1273	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D. L. A. O. N	D. L. A. O. S	D. L. T. K. W	D. L. T. K. E	Longitu A.
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′		° ′
May 18	69	30.2	30.1¾	68½	30.2	h. ENE. h. ENE. E. h. E. ENE. h. E. ENE.		15		10	W 17 9
19	68	30.2½	30.2¼	67¾	30.2¼	h. E by N. h. NE by N. h. c. N by W. C. N by W. NNE. c. f. NNE.		6	1		17.17
20	68	30.1¼	30.1½	68	30.1¼	c. NNE. NE. c. NE. N by E. NE by N. N by E. c. N by E. NNE. c. NNE.		24		3	17.42
21	68¼	30.1¼	30.1	68	30.1	f. c. NE by N. N by E. c. N by E. N by W. c. f. N by W. N by E. f. N by E. NNE.		1	4		18.18
22	70	30.1½	30.1¼	70¼	30.1½	f. N. f. c. N. NNE. c. NNE. c. NNE. NE by N. NE.		18			18.49
23	68	30.2	30.1¾	68	30.2	f. NE. NE by N. f. NE by N. f. NE by N. f. NE by N. NE.				1	19.28
24	68¼	30.1	30.0½	68¼	30.0¾	f. NE. NE by N. f. NE by N. f. c. NE by N. c. h. NE by N.	14		8		19.21
25	71¾	30.0	29.9½	72	29.9¼	h. N by E. h. N by E. h. N by E. h. NNE.		1	4		18.33
26	76½	30.0½	30.0	76½	30.0	h. NE by N. h. V. WNW. NW. h. NW. V. NNE. h. c. NNE. E by S. ESE.		8		2	18.37

e Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* AL

	D.L. A.O. N	D.L. A.O. S	D.L. T.K. W	D.L. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D.D T.K.	Longitude from Greenwich D	S.	C.	E D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical Dip Face E.	Magnetical Dip Face W.	Magnetical Dip MD
	′	′	′		° ′ W	° ′ W	′ W	° ′ W			′	° ′ N	° ′ N	° ′ W	° ′ W	′ ° W	°	°	°
}		15		10	17 9	16.46						29. 4	28.33	16.46	*18.23		61.2	62.6	62.
}		6	1		17.17	16.55						27.53	27.16	16.55	16.53* *16.39	17. 6*	60.2	61.2	60.0
}		24		3	17.42	17.17						26.46	25.45	17.20	16.37* 15.42*	16.17* 15.42*	59.2	60.2	59.0
}		1	4		18.18	17.57	57	18.54	4	⊙	29	25. 5	24. 3	18. 3		15 36*	58.2	59.2	58.6
}		18			18.49	18.28	66	19.34	3	⊙	28	23.43	22.25	18.37	15.13*	*15. 2	56.4	57.4	57.
}				1	19.28	19.6	41 65	19 47 20.11	4 3	⊙ ⊙	47 71	21.54	[20.36]	19.18	14 35* *13. 9	*13. 7	54.	55.2	54.5
}		14	8		19.21	19 7	79	20.26	3	⊙	37	19.21	17.49	19.22	13.56*	13.55*	51.	52.4	51 6
}		1	4		18.33	18.23						17. 1	15.28	18.41	13.18*	12.32*	48.6	49.4	49.1
}		8		2	18.37	18.25						16. 3	14.22	18.46			46.4	48.	47.2

. NNE.

N. N by E.

.

r. ng.	Magnetical Variation. Az.	Amp.	Dip Face E.	W.	MD.	C.D.		ML.	T.S. denotes the temperature of the sea-water taken up in a bucket about noon, and the thermometer immersed in this bucket for some minutes.
′	° ′	′ °	°	°	°	°		1273	
V	W	W							
46	*18.23		61.2	62.6	62.	61.6		53	Light breezes and smooth water. At noon, Peak of Tenerif S 50° E.
55	16.53* *16.39	17. 6*	60.2	61.2	60.6	60.4		74	Pleasant breezes from the Eastward. At noon, Peak of Tenerif (variation allowed) bore N 24° 30′ E, which bearing, and the difference of latitude places it 27′ to the Eastward of our situation at noon, when in 16° 55 long. by time-keeper, and consequently by time k. 16 28 is the longitude of Peak of Tenerif, only 4′ less than Pere FEUILLE makes it; but, by the observations of the Moon, on the 21st and following days, it appears, the ship was 1° farther West than the time-keeper represented, which difference arose since the 9th of May, if the Lunar observations were to be relied on.
20	16.37* 15.42*	16.17* 15.42*	59.2	60.2	59.6	59.4	Very steady.	70	Light breezes and smooth water throughout. Several petrills in the wake.
3		15 36*	58.2	59.2	58.6	58.4		106	Pleasant trade. In Captain EKEBERG's chart there being soundings laid down not far to the Eastward of our situation, sounded at 8 P.M. but had no ground 40 fath. Several petrills in the wake of ship.
37	15.13*	*15. 2	56.4	57.4	57.	56.6		87	Light breezes with smooth water throughout. Many petrills. N.B. There was apparently an error in this day's long. by time-keeper. The succeeding days diff. long. was as much less as this day's was more than account. I have here corrected it as conformable to the Lunar observations. T.S. 69°.
8	14 35* *13. 9	*13. 7	54.	55.2	54.5	54.3		115	In the evening, the water appeared of a muddy green, like soundings; but did not sound. An increasing trade with fair weather, the water continuing of same colour. T.S. 69°.
2	13.56*	13.55*	51.	52.4	51.6	51.3	Much motion.	153	These 24 hours a fresh trade, and mostly fair weather, the water remaining the same as before. T.S. 68°½.
1	13.18*	12.32*	48.6	49.4	49.1	48.6	Very steady.	150	Fresh trade and hazy weather. In the afternoon the sea remarkably confused, breaking different ways. Sounded in the morning, but had no ground 40 fath. In the morning the water appeared blue again. T.S. 71°.
6			46.4	48.	47.2	46.7		59	Light breezes chiefly. In the night, no ground 70 fath. There were many blubbers in the ship's wake, which made a very luminous appearance: they seemed in shape like a sausage about 8 or 9 inches long. In the day, sea was covered with Portugueze men of war, of which took up several; also some pilot-fish and skip-jacks. T.S. 74°.
								2140	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitu A.
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′	′	° ′ W
May 27	76¼	30.0¼	30.0	76	30.0	h. SE by E. h. c. V. E by N. c. h. E by N. V. h. V. NNW. NE.	7			4	18.18
28	78½	30.0	30.0	78½	30.0	f. NNE. N. f. N. NW by N. f. h. NW by N. h. NW by N. WNW.	1			3	17.26
29	80	30.1	30.1¼	80	30.1	h. W. h. C. SW. SW by W. h. SW by W. C. S. V. h. SW. SW by W. ESE. ENE.		2		8	17.16
30	77½	30.0¾	30.0¾	77	30.0¾	h. ENE. NE. V. W by S. h. SW by W. C. h. C. W. C. h. NW by N. NNW. N by W.	2			3	17. 9
31	80	30.0½	30.0	80	30.0	f. NNW. f. sq. hr. NW. NW by W. E. sq. hr. c. h. E. C. ENE. E by S. h. f. NE.	1		10		17. 4
June 1	82½	30.1	30.1	82½	30.1	f. NNE. N. NNW. f. SW by W. W. f. c. h. V. C. h. c. sq. h. NW. SE by E. SE.	10			10	16.51
2	82½	30.0¾	30.0¾	82½	30.0¾	h. SE. W. h. W. C. W. h. W. C. WNW. W by N h. W by N.	17				16.25
3	82¼	30.0¼	30.0½	81¾	30.0½	h. NW. L. to E. sq. r. c. NW. NW by N. E. V. c. L. to E. V. S by W. V. E by S. ESE. h. f. E by S. E. ESE.		8		6	16. 6
4	81¼	30.0½	30.0½	80½	30.0½	f. SE. SSE. SE by S. SSE. S by E. c. L. all round, sq. SSE. S by E. S by W. sq. SSW. C. sq. c. C. NNW.	10			10	16. 2

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

s.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	D. ☾ T.K.	☾	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical Dip Face E.	Magnetical Dip Face W.	Magnetical Dip MD
	′	′	′	′	° ′ W	° ′ W	′ E	° ′ W				° ′ N	° ′ N	° ′ W	° ′ W	° ′ W	°	°	°
	7			4	18.18	18. 2						15.32	13.48	18.26			46.	46.4	46.
	1			3	17.26	17. 7						14.28	12.45	17.34		13. 0*	44 4	45.	44.
. E. ENE.		2		8	17.16	16.49						13.57	12.12	17.19	12.37*	12.44*	43 6	44.	43.
by S. N by W.	2			3	17. 9	16.39						13.26	11.43	17.12		12.36*	42.6	43.4	43.
. S.	1		10		17. 4	16.44						12.22	10.40	17.20	12.24*	12.42*	41.6	42.4	42.
	10			10	16.51	16.11						11.40	10. 8	16.50	13. 7*	12.46*	41.	42.	41.
V by N	17				16.25	15.45						11.14	9 59	16.26	12.35*	12.31*	40.4	41.2	40
E. V. by S. ESE.		8		6	16. 6	15.20	35 62	15 55 16.22	3 3	⊙ ⊙	3 20	10.38	9.15	16.09	12.48*	12.55*	38.6	39.6	39.
SSE. S by E. by W.	10			10	16. 2	15. 6						10.23	9.10	15.58			38.4	39.2	38.

RCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

r. ng.	Magnetical Variation Az.	Variation Amp.	Dip Face E.	Dip Face W.	Dip MD.	Dip C.D.		ML.	
′	° ′	° ′	°	°	°	°		2140	
V .26	W	W	46.	46.4	46.2	45.7		46	Light airs of wind, variable, with very damp weather. In the night, no ground 40 fath. Many fish about the ship; some under the quarter, darting through the water, and making streaks of light in various directions, had a fine appearance. T.S. 75°.
.34		13. 0*	44 4	45.	44.6	44.3	Very steady.	82	Light breezes throughout. In the night, lightning to the Eastward. Many luminous blubbers and fish about the ship in the night. Passed several turtle. Had ground at 11 A.M. 32 fath. coarse sand, with black specks and shells. At noon, 30 fath. coarse sand and flat coral. T.S. 75°½.
.19	12.37*	12.44*	43 6	44.	43.7	43 4		37	First and latter, light breezes. Middle, calm. Great many fish about the ship, and in the morning vast flocks of birds. Soundings, sand of various kinds from 28 to 17½ fath. at 8 A.M.; at 9 A.M. 21 fath. blue mud; and at 11 A.M. no ground 35 fath. T.S. 77°.
.12		12.36*	42.6	43.4	43.1	42.6	Very steady.	32	Light airs and calm. At 5 P.M. 56 fath. green mud. At midnight, 45 fath. blue mud. In the night, the water very luminous when put in motion, and many shoals of fish looking like breakers. A.M. a turtle passed; vast flocks of sea birds. At noon, the sea covered with Portuguese men of war, like the ground with leaves in Oct. 23 f. blue mud. T.S. 76°½.
.20	12.24*	12.42*	41.6	42.4	42.1	41.5		69	Most part pleasant land and sea breezes. At midnight, a hard squall from the land: it was preceded by great deal of lightning over the land, and long threatning before the squall came off. It rose in a dark black cloud, with a white streak like a bow under it, and below this very dark. It came off very hard, and raised the spray of the sea in a foam. P.M. Soundings, 25 to 21 fath. sand. A.M. No ground 60 and 40 fath. T.S. 80°.
.50	13. 7*	12.46*	41.	42.	41.4	41.	Very unsteady.	53	Major part, light breezes. P.M. No ground 40 to 80 fath.
.26	12.35*	12.31*	40.4	41.2	40 7	40.3	Not very good observation.	39	First and latter parts, pleasant breezes from Westward. The middle, calm, with hot sultry weather. At midnight, 80 fath. coarse black sand, with bits of coral. At noon, 26 fath. coarse brown sand. T. S. 81°.
.09	12.48*	12.55*	38.6	39.6	39.2	38.6	Very steady.	45	Major part, light airs. Many sharks about the ship; above a dozen in sight at once; caught one. P.M. Soundings 27 to 35 fath. At noon, no ground 88 fath. T.S. 80°½.
.58			38.4	39.2	38.7	38 3		34	The first part, light breezes of wind from the Southward. The latter, mostly calm, with hot weather. In the evening, the clouds very remarkable; some appearing like dirty wool, and apparently very near all round the horizon; the sky above, in many places, a fine pink, and bluish grey beneath it. In the morning, many grampusses about the ship. At noon, ground 60 fath. T.S. 83°¼.
								2577	

1755	Th.	Marine Barometer, R.	S.	Th.	D.	Weather and Winds.	D.L. A.O. N	S	D.L. A. T.K. W	E	Longitu A.
		In.Dec.	In.Dec.	°	In.Dec		′	′	′	′	° ′ W
June 5	8[illegible] ¾	30.0¾	30.0½	80¼	30.0½	h. c. C. W by S. c. L. all rd. r. W by S. WSW. V. NNW. r. h sq. and hr. sq. r. NNW. SE by E. E by S. V. h. V. S by E. SSE.	10			20	15.43
6	83	30.0¾	30.0¾	83	30.0¾	f. C. V. f. L. to Eastw. SW by W. h sq. r. L. all rd. r. c. E by S. SE. E. E by N. c. f. E by N. C. SSE. S by E.	11		8		15.41
7	82½	30.1½	30.1¼	82¼	30.1¼	h. SE by S. S by E. C. h. c. V. SSE. SE by S. c. sq. S by W. V. C. sq. c. C. S by E. SSE. S.	11		19		15.41
8	83	30.1¼	30.1¼	83	30.1¼	c. hr. and L. to s.w. S. C. V. SW. sq. c. sq. SW. SW by W. SW. c. C. c. f. C.	23			12	15.22
9	84	30.0½	30.0½	84	30.0½	h. C. h. L. to westw. C. h. c. C. W by S. c. W by S.		3		3	15.18
10	81¼	30.0½	30.0½	80¾	30.0	f. c. sq. r. W. NNE. sq. r. c. NNE. V. C. c. L. to Ed. hr. C. V. C. ENE. r. c. ENE. V. SW by W.	3		19		15.0
11	77¼	30.0½	30.0½	76½	30.0½	c. sq. r. SW. SW by S. c. f. c. sq. r. SW. sq. r. SSW. SW. WSW. hr. r. WSW. V.	30			24	14.19
12	82	30.0¾	30.0¾	82	30.0¾	hr. V. SW. sr. r. c. SW. SW by S. SSW. c. r. SSW. C. V. c. C. V.					14.4
13	81½	30.0½	30.0½	81½	30.0½	c. WNW. NW. c. L. to westw. NW. c. NW. NW by N. c. th. L. to SW. V. NNE.				2	13.50

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

ds.	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D. ☽ T.K.	Longitude from Greenwich ☽	S.	C.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp	Magnetical Dip Face E.	Magnetical Dip Face W.	Magnetical Dip MD
	′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°
					W	W	E	W				N.	N.	W	W	W			
NNW. E. E by S. V.	10			20	15.43	14.28						9.43	8.40	15.43			38.2	38.4	38.3
E. E by N. S by E.	11		8		15.41	14.34						9.12	8.20	15.53	*13.33		36.6	37.2	37.
	11		19		15.41	14.53						8.56	8.15	16.16		12.28*	36.6	37.6	37.2
W. V.	23			12	15.22	14.22						8.33	8.15	15.49			36.6	37.6	37.2
		3		3	15.18	14.14						8.29	8. 8	15.46			36.4	37.6	37.1
V.	3		19		15.0	14.15	53	15.8	5	*S	48	8. 1	7.43	15.51			35.6	36.6	36.2
					14.19							7. 9	[7.14]	[14.53]			34.6	35.6	36.2
V.	30			24	14.4	12.55	58	13.53	3	*S	39	6.53	7. 5	14.39			35.2	35.4	35.3
				2	13.50	12.39	115	14.34	3	*S	15	6.25	6.37	14.27	13.18*		32.4 32.6	33.4 32.6	32.6

r. ng.	Magnetical: Variation Az.	Variation Amp	Dip Face E.	Dip Face W.	Dip MD.	Dip C.D.		ML.	
′	° ′	° ′	°	°	°	°		2577	
V	W	W							
43			38.2	38.4	38.3	37.7		48	Mostly light breezes. Past 2 P.M. a hard squall, with great deal of thunder, lightning, and rain. P.M. a boat came on board from the Polly, a whaling vessel, from Boston in New England; the vessel was hull down when they came aboard. A.M. spoke with the Mary, Captain JONES, from Liverpool to Sierra Leon. P.M. 40 to 36 fath. coarse sand. A.M. no ground 55 fath. T.S. 83°¼.
53	*13.33		36.6	37.2	37.	36.4	Very steady.	38	Mostly light airs and calms. At midnight, a violent gust of wind came off: its violence did not continue above a minute or two; but brought much rain, and was attended with thunder and lightning. A.M. no ground 88 fath. T.S. 82°.
16		12.28*	36.6	37.6	37.2	36.6		31	Light airs chiefly: a long swell from the SW. T.S. 82°½.
49			36.6	37.6	37.2	36.6	Very unsteady, great swell, and no sail.	30	First, light airs. Middle, fresh breezes and squally. Latter. calm. At midnight, carried away the main and fore-top-mast by the badness of the rigging. Had, for some hours, a pretty fresh SW wind; but not enough to have endangered the top-masts had the rigging been good. At 11 got fore-top-mast up. T.S. 83°.
46			36.4	37.6	37.1	36.5	Pretty steady.	6	Mostly calm, with swell from Southward. At 9 A.M. got up main-top-mast. T.S. 82°.
51			35.6	36.6	36.2	35.6	Very steady.	35	First, fair. Middle, squally, with hard rain. Latter, variable, with calms. T.S. 81°¼.
53			34.6	35.6	36.2	35.6	remarkably steady.	64	Cloudy and rainy, with a gentle breeze: great swell from Southw. T.S. 81°.
39			35.2	35.4	35.3	34.7	Very steady.	22	Calm and cloudy: great long swell from Southward. A.M. a very large shark was struck with the harpon; but it broke the harpon, and got off. Many fish and birds. T.S. 82°.
27	13.18*		32.4 32.6	33.4 32.6	32.6	32.1	Tightened the screws.	31	Light airs and cloudy through. Many fish and birds. P.M. no ground 70 fath. A.M. hooked a shark. T.S. 81°½.
								2882	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitu A.
	°	In. Dec.	In. Dec.	°	In. Dec.		′	′	′	′	° ′ W
June 14	82¼	30.0¼	30.0¼	82¾	30.0	c. V. C. c. SW by S. SSW. c. SSW. SW. hr. c. r. c. C. V. S by E.	15		4		13.20
15	83	30.0¼	30.0¼	82¾	30.0	h. S by W. S. SSW. h. f. SSW. c. r. c. SSW. SW. V. c. T. to s.e. V. SW by W. SSW. SW.	15			7	12.39
16	82	30.0¼	30.0¼	82	30.0	c. fr. fq. r. SW. V. S by W. fq. L. to n.e. S by W. V. C. SW. SW by S. c. SW by S. C. c. r. c. V. C. V.	5				12.27
17	79½	30.0¾	30.0¾	78½	30.0¾	fq. r. V. S by W. fq. r. c. V. SSW. c. r. c. SSW. S. SW. c. hr. c. SW by W. WSW. SW by W.	7			24	11.58
18	80½	30.0¾	30.0¾	80¼	30.0¾	c. SW by W. SW. C. W by N. fq. c. W by N. W by S. V. C. c. C. NE. c. NE. ENE.		7		5	11.44
19	80½	30.0½	30.0½	80	30.0½	h. NNE. C. V. L. to nd. c. V. WSW. c. WSW. W by S. V. c. fr. c. V. C. SW by S.	5			1	11.29
20	82	30.0¾	30.0¾	81	30.0¾	c. SW by S. SSW. SW by S. c. L. fq. r. c. SW by S. SSW. SW by S. SW. SSW. c. SSW. V. S by W. c. r. S by E. C. SE by S. V.	16			5	10.52
21	79	30.0½	30.0½	79	30.0½	c. S by E. S. SSW. c. L. from n. to s.e. fq. r. SSW. SW by S. SSE. S. r. hr. S. hr. c. r. S by E. C.					10.31
22	80¾	30.0¼	30.0¼	80½	30.0¼	hr. C. SSW. V. C. hr. C. ESE. V. hr. fq. hr. V. SSE. V. fq. r. V.	13		3	13	10.50

The East-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

s.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitude from Greenwich A.	T.K.	D. ☾ T.K.	☾	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Variation Amp.	Dip Face E.	Face W.	MD
	′	′	′	′	° ′ W	° ′ W	′ E	° ′ W				° ′ N	° ′ N	° ′ W	° ′ W	° ′ W	°	°	°
	15		4		13.20	12.14	120	14.14	3	*Am.	48	6. 5	6.32	14. 6		13.28*	32.6	33.6	33.
SW.	15			7	12.39	11.26						5.32	6.14	13.18		13.32*	32.	32.4	32.
. SW by S.	5				12.27							5.18	6. 5	[12.59]			31.6	32.	31.7
				24															
SW by W.	7				11.58	10.21						4.55	5.49	12.13			30.	30.6	30.3
W by N. . C.		7		5	11.44	10. 2						4.36	5.23	11.54			29.2	30.	29.5
	5			1	11.29	9.46						4.15	5. 7	11.38	13.30*	13.50*	28.6	29.6	29.2
by S. S. SW. SSW. V.	16			5	10.52	9. 4						3.49	4.57	10.56	14.23* *14.43	14.41*	28 6	29.6	29.2
y S. SSE. S.					10.31	8.46						3 45	[4.54]	10.38	14.40*		28.4	29.4	29.
	13		3																
				13	10.50	8.52						3.19	4.39	10.44			27.6	28.4	28.1

RCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

or. ong.	Magnetical Variation Az.	Variation Amp.	Dip Face E.	Dip Face W.	Dip MD.	Dip C.D.	ML.	
′	° ′	° ′	°	°	°	°	2882	
W	W	W						
. 6		13.28*	32.6	33.6	33.2	32.5	37	In the night, many fish. A.M. struck an albicore; it has from the back fin to the tail nine little yellow fins, and nin more such from the belly fin to the tail. Besides the fin o the back, it has another fin, composed of a thin membrane, with sharp prickly ribs; this fin it can strike, having groove to receive it, so that there remains no projection or appearance of it. Light airs. No ground 65 to 70 fath. T.S. 81°¼
.18		13.32*	32.	32.4	32.2	31.5	54	Light breezes, with a swell from the Southward. T.S. 82°.
59]			31.6	32.	31.7	31.2	19	PM. many fish; but swimming very deep. A.M. caught three sharks. Most part light airs and calm with rain. T.S. 81°½
.13			30.	30.6	30.3	29.6	43	First part, squally, with rain and wind Southerly. The latter, light airs S.W. cloudy and rain. A.M. appearance of land to Eastward under the clouds, but very obscure, being thick and hazy weather. T.S. 81°.
.54			29.2	30.	29.5	28.7	24	Pleasant weather. A.M. some dolphins. Light airs of wind, variable with calms. T.S. 81°½.
38	13.30*	13.50*	28.6	29.6	29.2	28.4	26	Light airs, with lightning and some thunder in the night. In the morning, it looked very black, but was not attended with any squall. T.S. 81°.
.56	14.23* *14.43	14.41*	28 6	29.6	29.2	28.4	46	Mostly light breezes and cloudy, with rain. I ascribe the error of this day's log partly to the course having made no allowance for lee-way. T.S. 82°.
38	14.40*		28.4	29.4	29.	28.2	44	First and middle parts, light breezes, with some squalls, and heavy rain. The latter, calm, with cloudy weather and rain. In the morning, at 8 P.M. saw the land, bearing E by S 7 leagues. Sounded 46 fath. mud; but there was the mark of rock on the arming of the lead. At 10 A.M. the extremes of the land from N by E½E to E distance about 7 leagues. The N extreme I suppose is *Punta Baixas* near *Sestos* river, and the Southern extreme supposed about *Boca*: There was a hill, visible inland, to the left, which was supposed to be that of *Bassa*. T.S. 81°.
44			27.6	28.4	28.1	27.3	35	At Sun-set, the extremes N¾E to E¾S (per compass) distance off shore about 6 leagues. 43 fath. blue mud. Variable winds, with very much hard rain. T.S. 81°.
							3210	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D.L. A.O. N	D.L. A.O. S	D.L. A.T.K. W	D.L. A.T.K. E	Longitu A.
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′	′	° ′
June 23	82	30.0	29.9¾	81¾	30.0	r. c. SSE. S. S by W. c. ſq. S by W. S. S by E. r. c. S by E. SSE. c. h. S. S by W. S.	12		1		W 11.13
24	80½	30.0	29.9¾	80	29.9¾	h. ſq. r. S. S by W. SSW. ſq. r. c. S by W. c. ſq. c. S by W. c. ſq. r. S by W. S.	3		3		11.42
25	77¼	30.0½	30.0½	76½	30.0	h. c. S. S by W. SSW. c. SSW. c. SSW. c. r. SSW. V. C. W by S.					11.16
26	80	30.0½	30.0¼	80½	30.0½	hr. c. ſq. V. SSW. ſq. r. SW by S. r. SW by S. S by W. SSW. r. c. S by W.	21			52	10. 2
27	80¼	30.0½	30.0½	80¼	30.0½	c. ſq. SSW. SW by S. SSW. c. ſq. SSW. S by W. ſq. c. S by W. S. c. S. S by W. S.		24		44	10. 6
28	80½	30.0¾	30.0¾	80¼	30.0¾	h. S. S by E. h. ſq. f. c. S by E. ſq. c. S. c. f. S. S by E.		13		2	11.10
29	79½	30.1	30.1	79	30.1	c. S. S by E. S. c. S by E. c. f. S by E. S. f. S by E.		20	39		12.18
30	78½	30.2	30.1½	78½	30.1	f. S by E. f. c. S by E. c. f. S by E. f. S by E. S.	1		77		13.21
July 1	77½	30.1½	30.1½	76¾	30.1	c. S. c. S. c. S by E. S. c. f. S. S by E. S.	21		76		12.35
2	78½	30.1¼	30.1	78	30.1	h. S by E. S. S by E. h. c. S by E. SSE. S by E. c. S. c. S. S by E. S.	14		62		13.33

The East-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* A

	D.L. A.O. N	D.L. A.O. S	D.L. A.T.K. W	D.L. A.T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D.☽ T.K.	Longitude from Greenwich ☽	S.	O.	E.D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical Dip Face E.	Magnetical Dip Face W.	Magnetical Dip MD
	′	′	′	′	° ′ W	° ′ W	′	° ′ W			′	° ′ N	° ′ N	° ′ W	° ′ W	′ ° W	°	°	°
	12		1		11.13	9.16						3. 0	4.32	11. 6			28.	28.4	28.2
	3		3		11.42	9.48						2.53	4.28	11.37			28.4	29.4	29.
s.					11.16							2.35	[4.21]	[11.11]			27.4	27.6	27.5
	21			52															
sw.					10. 2	7.40						2.23	4.16	9.26			26.4	27.4	27.
v.		24		44	10. 6	7. 0						2.13	3.42	8.45			25.4	26.	25.6
		13		2	11.10	8. 2						1.34	2.50	9.45	14.42* *14.11		24.4	25.2	24.7
		20	39		12.18	9.48						1. 0	1.56	11.29	14.37* *13.44	14.25*	23.6	24.4	24.1
	1		77		13.21	12.8						0.14	1.11	13.48	13. 6* *12. 7		23.6	24.4	24.1
	21		76		12.35	12.38						0.16	1.34	14.17	13.17*		24.6	24.4	24.5
	14		62		13.33	14.38						S 0.22	1.10	16.16	12.41*	12.47*	24.6	25.4	25.1

g.	Magnetical Variation. Az.	Amp.	Dip Face E.	W.	MD.	C.D.		ML.	
	° ′ W	′ ° W	°	°	°	°		3210	
6			28.	28.4	28.2	27.4	Very unsteady.	54	Moderate breezes. T.S. 81°.
37			28.4	29.4	29.	28.2		73	Most part a fresh gale from Southward, with squalls and rain. T.S. 81°.
1]			27.4	27.6	27.5	26.7	Pretty steady.	58	Most part fresh breezes. At 8 P.M. Richard Jones, the surgeon's lad, fell over-board. Hove the ship to, and sent jolly boat and yawl in search of him; but they could not find him. No observation for latitude or time, not having one glimpse of the Sun all the forenoon. P.M. no ground 50 fath. T.S. 80°½.
6			26.4	27.4	27.	26.2		58	A fresh breeze with much rain. P.M. no ground 70 fath. T.S. 80°½.
5			25.4	26.	25.6	25.		73	Mostly fresh breezes. At 2 P.M. from mast-head *land*, making like islands, was seen bearing E by N=ENE½N, supposed Cape Palmas. P.M. no ground 70 fath. At 8 P.M. spoke with a French ship from *Bacon* to the coast of *Angola*. T.S. 80°.
5	14.42* *14.11		24.4	25.2	24.7	24.		76	Fresh breeze throughout, and a large Southerly swell. T.S. 80°¼.
9	14.37* *13.44	14.25*	23.6	24.4	24.1	23.2	Very unsteady.	79	Fresh breeze throughout. P.M. cloudy. A.M. fair. T.S. 79°½.
8	13. 6* *12. 7		23.6	24.4	24.1	23.2	Pretty steady.	78	Fresh breezes with fair weather. P.M. many porpoises. Some bottle noses, and vast flocks of flying fish. A.M. a man of war bird. T.S. 76°¾.
7	13.17*		24.6	24.4	24.5	23.6		66	Major part moderate and cloudy. T.S. 78°.
6	12.41*	12.47*	24.6	25.4	25.1	24.2	N.B. going to *Westward* encreases dip.	70	Pleasant breeze, with fair weather and smooth water. T.S. 76°.
								3895	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.		D.L. A.O. N	D.L. A.O. S	D.L. A.T.K. W	D.L. A.T.K. E	Longitu A.
	°	In.Dec.	In.Dec.	°	In.Dec.			′	′	′	′	° ′ W
July 3	79	30.0¾	30.0¾	79	30.0½	h.	S. S by E. S.					
						h.	S by E. SSE. S by E. S. S by E.		3	35		14.56
						h. sq. c.	S by E.					
						c.	S by E. SSE. S by E. SSE.					
4	77½	30.1	30.0¼	77	30.0½	h.	SSE. SE by S. SE. SE by S.					
						h.	SE by S. SE.		14	30		15.44
						h. f. c.	SE by S.					
						c. f.	SE.					
5	78½	30.1¼	30.1¼	78½	30.1	h.	SE. SE by E. ESE.					
						h. f.	ESE.	2		15		16. 4
						f. c. f.	ESE. SE by E.					
						f.	SE by S. SE.					
6	79¾	30.1	30.0¾	79¾	30.0½	f.	SE by E. SE.					
						f. c.	SE by E. SE.	12		29		16.49
						c. sq. r. c.	SE. SE by E. SE by S.					
						c. sq. r.	SE by S.					
7	80	30.0½	30.0¾	80	30.0½	c.	SE. SE by S. SE.					
						c. f.	SE. SE by E. SE.		14	8		17.39
						f. c.	SE by E.					
						c. sq.	SE by E.					
8	79½	30.0½	30.0½	79¼	30.0½	sq. r. sq.	SE by E. SE.					
						sq. c.	SE.		14		5	18.42
						c.	SE.					
						c. sq. r. h. f.	SE. SE by E.					
9	79½	30.1½	30.1¼	79½	30.1½	f. sq.	ESE. SE by E. SE.					
						sq. f.	SE.		3		14	19.45
						sq. c.	SE. SE by E.					
						c.	SE by E. SE.					
10	77½	30.1½	30.1¼	77½	30.1½	f.	SE. SE by E.					
						f. sq.	SE by E.		5		21	20.37
						c. sq.	SE. SE by E.					
						sq.	SE by E. ESE. SE.					
11	77	30.2¾	30.2½	76¾	30.2½	h. sq. r. c.	SE. SE by E.					
						c. sq.	SE. SE by E. SE.				8	21.42
						sq. c.	SE. SE by E.					
						c. f.	SE by E. SE.					
12	76½	30.3	30.2¾	76½	30.2¼	h.	SE.					
						h. f.	SE. SE by E.		1		4	22.29
						f. c.	SE by E.					
						c. sq.	SE. SE by E.					

o The East-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

s.	D.L. A.O. N	D.L. A.O. S	D.L. A.T.K. W	D.L. A.T.K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	Longitude from Greenwich D. ☾ T.K.	Longitude from Greenwich ☾	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical North Dip Face E.	Magnetical North Dip Face W.	Magnetical North Dip MD
	′	′	′	′	° ′ W	° ′ W	′ E	° ′ W				° ′ S	° ′ N	° ′ W	° ′ W	° ′ W	°	°	°
E. S. S by E.		3	35		14.56	16.36						1. 6	0.17	18.13	11.37*		24.2	24.6	24.4
E. SSE.																			
SE by S.		14	30		15.44	17.55						2.13	S 1. 8	19.29	10.31* *9. 0	*8.40	22.2	22.6	22.4
	2		15		16. 4	18.30	93	20. 3	4	☉	26	3.28	2.21	20. 3	8.59* *8.32	8.59*	19.6	20.6	20.2
S.	12		29		16.49	19.44						4.56	3.37	21.20	8.37*	8.54*	19.2	20.2	19.6
		14	8		17.39	20.42						6.22	5.17	22.20	7.52*	7.49*	15.4	16.2	15.7
		14		5	18.42	21.40						8. 1	7.10	23.20	*6.26	*6.33	11.	12.6	11.7
		3		14	19.45	22.29						9.45	8.57	24.11			7.2	8.4	7.7
E.		5		21	20.37	23. 0						11.33	10.50	24.44	5.44*	5.32*	3.6	5.0	4.3
				8	21.42	23.57						13. 7	12.24	25.43	*4. 0		2.2	2.4	2.3
		1		4	22.29	24.40						14.48	14. 6	26.28	4.15*	4.20*	1.4	1.2	South I 1.3

RCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

r. ng.	Magnetical Variation Az.	Variation Amp.	North Dip Face E.	North Dip Face W.	MD.	C.D.		ML.	
′	° ′	° ′	°	°	°	°		3895	
V	W	W							
13	11.37*		24.2	24.6	24.4	23.5		97	Fresh breeze throughout. T.S. 76°.
29	10.31* *9. 0	*8.40	22.2	22.6	22.4	21.5	Very steady.	86	Pleasant trade wind, with a Southerly swell. T.S. 76°½.
3	8.59* *8.32	8.59*	19.6	20.6	20.2	19.3	Extremely steady.	80	Night, sea luminous supposed blubber. Major part, pleasant breezes, with a swell from SE. T.S. 76°½.
.20	8.37*	8.54*	19.2	20.2	19.6	18.7	Great swell.	99	A.M. great swell. In the forenoon, hard rain, small drops, but very close. First part, fresh trade; latter, squally and some rain. T.S. 77°½.
.20	7.52*	7.49*	15.4	16.2	15.7	15.	Very great swell.	101	Great swell. The barometers very unsteady. Fresh gales and cloudy. T.S. 78°½.
.20	*6.26	*6.33	11.	12.6	11.7	11.	Pretty steady, though great swell; touched the screws, and found the same.	118	Ditto. Ditto Strong gales and squally. T.S. 78°.
.11			7.2	8.4	7.7	7.	Pretty steady.	121	Ditto. Fresh gales throughout. T S. 78°.
.44	5.44*	5.32*	3.6	5.0	4.3	3.4	Ditto, but great swell.	120	Ditto. Saw a pettril. Fresh gales from SE. with a large swell. T.S. 77°.
.43	*4. 0		2.2	2.4	2.3	1.4	Not steady.	114	Major part fresh gales and squally, with a great confused swell. P.M. a weather gall. A.M. Swell much abated. Towards noon, moderate and fair. T.S. 75°.
			South Dip.						
.28	4.15*	4.20*	1.4	1.2	1.3	2.2	Pretty steady.	111	Pleasant trade wind. Swell very much abated. A.M. saw a bird, supposed to be a sheerwater. Mr. ROBERTS saw a man of war bird. T.S. 75°½.
								4942	

1775	Th.	Marine Barometer, R.	S.	Th.	D.	Weather and Winds.		D.L A.O. N	S	D.L. A. T.K. W	E	Longitu A.
		In.Dec.	In.Dec.	°	In.Dec			′	′	′	′	° ′
												W
July 13	76	30.2¾	30.2½	76	30.2½	h. ſq. r.	SE by E. SE by S. SE by E.	2		6		23.30
						ſq. r. c.	E by S. SE.					
						c.	SE. SE by S. SSE.					
						c.	SE by S. S by E. SSE.					
14	76	30.3¼	30.3	76	30.2½	f. ſq.	SE by S. SE.	3		9		24.27
						ſq. f.	SE by E. SE by S.					
						c. ſq. c.	SE by S. SE.					
						c. f.	SE. SE by E. SE.					
15	76¼	30.2½	30.2½	76½	30.2¼	f. c. ſq.	SE. SE by S. SE.				1	25.20
						c. r. c. ſq. r.	SE by E. SE by S. SSE. V.					
						ſq. r. c.	SE.					
						c. h.	SE by E.					
16	74½	30.3½	30.3	74½	30.2¾	c.	SE. SE by E.		1	1		25.42
						c.	SE by E. ESE.					
						c.	E by S. SE by E. E by S. SE by E.					
						c.	SE. ESE.					
17	73	30.4	30.3¼	73	30 3½	c.	SE by E. V. SSE. V. ESE.	2		5		26. 2
						c. ſr. ſq.	SE by E. V. SE.					
						ſq. ſr.	SE by E. V.					
						ſq. ſr. c. ſq.	SE. E by S. ESE.					
18	75½	30.4	30.3½	75½	30.3½	f.	SE by E. SE.		8	4		26.29
						f. c.	SE by E.					
						c.	SE by E. SE.					
						c. f.	SE. E by S. ESE. E by S.					
19	73½	30.4	30.3	73½	30.3	c. ſq. c.	ENE.					26.12
						ſr. ſq.	V. ESE.					
						r. ſq. r. f. ſq. r.	V. C. NE. V.					
						ſq. r. c. f.	C. N. V. N.					

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

ds.	D.L A.O. N	D.L A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	TK.	D. ☽ T.K.	☽	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Variation Amp.	Dip Face E.	Face W	MD
	′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°
SE by E. SE.	2		6		W 23.30	W 25.47	E	W				S. 16.17	S. 15.33	W 27.37	W *2.43	W *2.42	3.4	3.4	3.
	3		9		24.27	26.53						17.46	16.59	28.45	1.48* *1.45	1.36* *1.49	5.2	5.4	5.
SSE. V.				1	25.20	27.45						18.58	18.11	29.39	*1.21		7.4	8.	7.
by S. SE by E.		1	1		25.42	28. 8						19.47	19. 1	30. 4	0.42*		9.2	9.6	9.
V. ESE.	2		5		26. 2	28.33	105	30.18	3	*Ar.	31	20.47	19.59	30 31			11.	11.2	11.
E by S.		8	4		26.29	29. 4	138 120	31.22 31. 4	3 3	☉ ☉	11 23	22. 9	21.29	31.15	E 0.20*	E 0.13*	13.	13.	13.
					26.12	28.47	145	31.12	3	☉	15	22.48	22. 8	30 59		0.44*	14.4	14.4	14.4

or. ong.	Magnetical: Variation Az.	Variation Amp.	Dip Face E.	Dip Face W	Dip MD.	Dip C.D.		ML.	
′	° ′	° ′	°	°	°	°		4942	
W	W	W							First part, fresh gales and squally. Latter, moderate and fair. A.M. Fog Bank exactly like an island, the outline perfectly well defined, except the extremities: I never before saw any cloud so like land. T.S. 74°.
·37	*2.43	*2.42	3.4	3.4	3.4	3 4		111	Changed the poles of the dipping-needle. Mean of the various trials changed and re-changed 3½ S. viz. E. W. MD. Changed the poles, marked end down, 4.4 4. 4.2; Re-changed, ditto up, 2.6 3. 2.7; Ditto, ditto down, 4.4 4.6 4.5; Ditto, ditto up, 2.4 2.4 2.4; Mean 3.4 3.4 3.4
·45	1.48* *1.45	1.36* *1.49	5.2	5.4	5.3	6.2	Not very steady.	104	Constant trade wind. T.S. 74°.
·39	*1.21		7.4	8.	7.6	8.5		88	First part, moderate. Middle, hard squalls and rain. T.S. 74°½.
· 4	0.42*		9.2	9.6	9.4	10.3	Pretty steady.	54	A.M saw a bird like a booby, but shorter winged and necked, called by sailors, poor John. Light breezes, swell much abated. T.S. 74°.
31			11.	11.2	11.1	12.		69	P.M. to the NE. the clouds very remarkable, being in white curved rays, like the variation chart. At 7 A.M. saw Trinidada from mast-head SSE. At 9 visible from deck. At noon, Trinidada S 36° E 11 leagues. Major part, moderate breezes and cloudy weather; winds variable and smooth water. By the bearings of Trinidada at noon, allowing it to lye in 20° 27′ S according to Dr. HALLEY. Its longitude per T. K. 28.13 W; Mean diff. T.K. and ☽ 8 obs. ☉ and 1 ✱ 1.58; 8 obs. ☉ 2.12; Long. 8 obs. ☉ and ☽ 1 obs. ✱ At. 30.11; 8 obs. ☉ & ☽ 30.25; By Dr. HALLEY, 29.50; 29.50; Diff. 0.21; 0.35; T.S. 74°.
15	E 0.20*	E 0.13*	13.	13.	13.	13.7	Very unsteady.	87	At Sun-set, Trinidada E by S ½ S 8 or 9 leagues. T.S 76°.
59		0.44*	14.4	14.4	14.4	15.3	Pretty steady.	47	Mostly light breezes and cloudy. T.S. 74°.
								5502	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D L A.O. N	D L A.O. S	D. L. A. T.K. W	D. L. A. T.K. E	Longitude A.
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′	′	° ′
July 20	75	30.4	30.3½	74½	30.3	f. C. f. C. NE. f. c. f. C. V. f. E. ENE.		3	5		W 26. 8
21	73	30.4	30.3¾	73¼	30.3¼	f. C. ENE. f. c. ENE. E by N. c. h. E by N. ENE. h. c. ENE. NE.		4			25.35
22	74¼	30.5	30 4½	74	30.4¼	f. NE. f. h. sq. fr. NE. V. c. f. V. NE by E. V. f. V. ENE.		2		8	24.49
23	74	30.6	30.5½	74	30.5	f. E. E by S. f. E. E by N. E. f. E by S. V. f. SE by E.		7	8		24.55
24	71¼	30.6	30.5½	71½	30.5	f. SE by E. SE. f. SE by E. ESE. f. c. ESE. c. ESE. SE by E.	2		14		25.20
25	72½	30.6	30.5½	73	30.5	c. ESE. SE. SE by E. c. SE by E. c. h. ESE. SE by E. h. V. SE.		2		3	25.49
26	71	30.6	30.5½	71½	30.5	c. E by S. SE by E. SE. c. sq. with fr. V. SE by E. sq. with fr. h. SE by E. V. h. f. SE. SE by E. V.		4	6		26.23
27	70¼	30.6	30.5½	70¼	30.5	f. ESE. SE. f. SE. SE by E. ESE. V. f. V. ESE. f. E. E by S.		6		4	26.36
28	68	30.5½	30.4¾	68¼	30.4½	f. V. f. C. f. c. C. NE by E. C. c. f. WNW. W by S.		6	9		26.18
29	66¼	30.4¼	30 3½	66¾	30.3¼	h. W by S. V. c. V. NW. c. NW. V. c. f. with c. V. WNW. NNW by W.		6	3		25.21

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* ALEX.

D L A.O. N	D L A.O. S	D. L. A. T.K. W	D. L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	Longitude from Greenwich D. ☾ T.K.	Longitude from Greenwich ☾	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W.	Magnetical South Dip MD
′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°
	3	5		W 26. 8	W 28.48	E 137	W 31. 5	3	☉	12	S 22.57	S 22.20	W 31. 0	E	E *0.44	14.6	15.	14.7
	4			25.35	28.15	115 128	30.10 30.23	3 4	☉ ☉	29 16	24. 7	23 34	30.27	*0.42	0.55* *1. 5	17.4	18.	17.6
	2		8	24.49	27.21	174 94	30.15 28.55	5 3	☉ ☉	22 18	25.10	24.39	29.33	0.11* W *0.15	0.17* W *0.22	19.4	20.4	20.
	7	8		24.55	27.35	147 135 140	30. 2 29.50 29.55	3 3 3	☉ ☉ ☉	24 16 20	26.12	25.48	29.47	E 0. 6*	E 0.11*	21.	21.6	21.3
2		14		25.20	28.12						27.44	27.18	30.24	1. 0* *1.13	1.10*	23 4	24.	23.6
	2		3	25.49	28.38						28.54	28.30	30.50	2.12* *1.52	2.16* *1.27	26.	27.	26.4
	4	6		26.23	29.18						29.55	29.35	31.29		1.52*	27.2	28.	27.5
	6		4	26.36	29.27						30.36	30.22	31.37	*3. 0	*3.14	27.6	28.6	28.2
	6	9		26.18	29. 0						30.45	30 37	31. 8	2.45*	2.16*	27.6	28.6	28.2
	6	3		25.21	27.50						31. 5	31.33	30. 2	*2.10		29.	30.	29 4

RCROMBIE, *kept by* ALEXANDER DALRYMPLE, 1775.

r. ng.	Magnetical Variation Az.	Variation Amp.	South Dip Face E.	Face W.	MD.	C.D.		ML.	
′	° ′	° ′	°	°	°	°		55°2	
0	E	E *0.44	14.6	15.	14.7	15.6	Not very steady.	10	Mostly calm throughout, with smooth water. T.S. 74°½.
27	*0.42	0.55* *1. 5	17.4	18.	17.6	18.5	Extremely unsteady, the ship having an irregular motion, tho' smooth water.	76	Major part light breezes, with smooth water. T.S. 72°.
33	0.11* W *0.15	0.17* W *0.22	19.4	20.4	20.	20.7	Very steady.	76	Pleasant breeze and smooth water. T.S. 72°.
47	E 0. 6*	E 0.11*	21.	21.6	21.3	22.2	Extremely steady, though long swell.	65	Pleasant breezes; a long swell. T.S. 70°.
4	1. 0* *1.13	1.10*	23 4	24.	23.6	24.5		96	Pleasant breeze. At 10 A.M. saw a sail bearing S by W. T.S. 69°.
0	2.12* *1.52	2.16* *1.27	26.	27.	26.4	27.3		76	Light breezes throughout. Passed by the sail at midnight; it was a small two-mast vessel. At 6 A.M. saw the vessel a-stern. T.S. 69°½.
9		1.52*	27.2	28.	27.5	28.4	Very steady.	69	Winds mostly variable. T.S. 67°¼.
7	*3. 0	*3.14	27.6	28.6	28.2	29.1		43	Light airs. T.S. 63°.
8	2.45*	2.16*	27.6	28.6	28.2	29.1		18	Mostly calm. T.S. 66°.
2	*2.10		29.	30.	29 4	30.3	Very unsteady.	55	Major part light breezes. T.S. 67°½.
								608 4	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.		D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitu A.
	°	In.Dec.	In.Dec	°	In.Dec.			′	′	′	′	° ′ W
July 30	65¼	30.2¼	30.1¾	65¼	30.1½	c. sq, r. c. sq. r. sq, r. c. c. c. sq.	NW by W. NW by W. NW by N. NW by N. NW by N.		7		5	22.36
31	62		29.8	62		f. c. sq. r. sq, r. sq. r. hsq. hsq, r. sq, hr. hsq.	NW by N. NW by N. NWbyN. NNW. NbyW. N.	5	26			19.14
Aug. 1	61¼		29.8½	61¼		sq, r, L. sq, r, L. sq, r. sq. c. c.	NNW. NNW. NNW. NW. WNW. WNW. W by N.					16.28
2	58½	29.9	29.8¼	58½	29.8½	h. h. c. sq, r. L. sq. c.	W. W. V. W by S. W by S. WSW. WSW. V. W by S.	2			16	14.53
3	55½	29.3	29.2½	55½	29.2¼	c. sq, r. L. to e.n.e. h. sq. sq. L, r. c. L, r. c. L, r. sr.	SW. V. W. NE by N. ENE. V. NEbyE. N. WNW. V. W.		1		5	13.56
4	54¾		29.8	54¾		sq. c. r. sq, r. hard gales. ditto.	W by N. V. W by S. V. S by E. S by E. S by E. SSW.	2		12		11.45
5	51¾		30.0½	50¾		h. sq, r. sq, r. sq, hail. sq, hail. sq, r. hail. sq. sq. sq, hail. hsq, hail.	SSW. SW by S. SW by S. V. SSW. S by W.	11			35	9.24
6	53		30.2¾	52		sq, r. sq, hail. sq, r. hail. sq, r. c. c. sq. sq, r. sq, r. sq. sr.	SSW. S by W. S by W. S. S. S. S by E.	14			2	7.19
7	56¾		30.0½	56		c. c. f. h. h. c. sq, r. sq, r.	S by E. C. NNE. C. NNE. NE by N. V. NNE. NNE. NE by N.		25		6	6. 5
8	60¼	30.1	30.0	60	30.0	sq, r. sq, r. c. sq, r. sq, r. sq, r. f.	NNE. NNE. NNE. V. N by E. N. V. NNW. V.					3.55

to The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* ALEX

	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D. ☽ T.K.	Longitude from Greenwich ☽	S.	O.	E D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W.	Magnetical South Dip MI
	′	′	′	′	° ′	° ′	′	° ′			′	° ′	° ′	° ′	° ′	′ °	°	°	°
NW by N.		7		5	W 22.36	W 25. 6						S 32. 3	S 32. 8	W 27.10	E 2.26* *1.27	E *1.42	31.3	32.3	31.
NW. NbyW.	5		26		19.14							33.14	[33.19]	[24. 3]	0.44*				
V. WNW. by N.					16.28	19.24						33.35	33.35	21.22			34.	35.	34.
by S. VSW. W by S.	2			16	14.53	17.33						34. 9	34. 7	19.28	W *2.35		33.4	34.4	34.
V. VNW. V. W.		1		5	13.56	16.29						34.26	34.25	18.21		W 3.18*	34.4	35.4	35.
. W by S. V. V.	2		12		11.45	14.30						33.37	33.34	16.19					
. SSW.	11			35	9.24	11.34						33.37	33.23	13.20					35.
W.	14			2	7.19	9.27						33.37	33. 9	11.10					
NNE. V. NNE. by N.		25		6	6. 5							33 37	[33.21]	[9.53]					
N by E. N. V.					3.55	5.57						33.51	33.48	7.37					

g.	Magnetical Variation. Az.	Amp.	South Dip Face E.	W.	MD.	C.D.		ML.	
	° ′	′ °	°	°	°	°		6084	
10	E 2.26* *1.27	E *1.42	31.3	32.3	31.7	32.5	Not steady.	152	An increasing gale from NW quarter, with frequent squalls. 9 P.M. bar. 30.1¾. 8 A.M. 30.2¼. T.S. 65°½.
3	0.44*						No obs. too much motion.	184	Strong gales, with hard squalls and rain. 9 P.M. bar. 30.1½. 12. 30.1. 8 A.M. 29.9½. 10. 29.9. 11½. 29.8½.
22			34.	35.	34.4	35.2	Very unsteady.	141	First part, blowing very fresh from N.W. Latter, more moderate, with very large sea. Bar. 1½. 29.7½. 2½. 29.7. 4. 29.7½. 6. 29.8. 8. 29.8. 10. 29.8. A.M. 7. 29.8.
28	W *2.35		33.4	34.4	34.	34.6	Unsteady.	86	Major part, light breezes, with great swell.
21		W 3.18*	34.4	35.4	35.	35.6	Not very unsteady.	55	Winds variable, with squally weather and confused sea. bar. 3 P.M. 29.8. 6. 29.7¾. 10. 29.7. 8 A.M. 29.3. 9 A.M. 29.2¾. About noon, it appeared very threatning to the Northward, but the clouds dissipated.
19							No obs. too much sea.	129	First part, squally with some rain. The middle, excessive hard gales, with a great sea; and the spray so thick that the ship was covered with it. 2 P.M. bar. 29.2¼. 4. 29.2. 6. 29.2¾. 9. 29.5. 7 A.M. 29.7½. 9. 29.7¾. 11. 29.8.
20					35.	35.6	Very unsteady.	117	Squally weather, with much hail and rain, and a large swell. Bar. 4 P.M. 29.8½. 6. 29.9. 8. 30.0. 7 A.M. 30.0¼. 9 A.M. 30.0¾.
10								103	First and middle, fresh gales and squally. Latter, moderate; great swell. AM. some silver birds. Bar. 2 P.M. 30.0¾. 5. 30.1. 10. 30.2. 7 A.M. 30.2. 9. 30.3.
53								62	First, light airs, with cloudy weather. Latter, fresh gales, with rain. P.M. Venus appeared very dim and fuzzy; a rim round the Moon. 9 A.M. bar. 30.1½. 11. 30.0¾.
37								109	First and middle, hard gales, squally with rain. Latter, moderate and hazy; great swell. A.M. some silver birds, a pintado bird. Bar. 2 P.M. 29.9½. 8 A.M. 29.9½. 9. 29.9¾. 10. 30.0. 30.0¼.
								7222	

1775	Th.	Marine Barometer, R.	S.	Th.	D.	Weather and Winds.	D.L A.O. N	S	D.L. A. T.K. W	E	Longitu A.
		In.Dec.	In.Dec.	°	In.Dec		′	′	′	′	° ′
Aug. 9	62½		30.0½	62½		f. NW by N. NNW. f. ſq. h. ſq, r. NNW. N by E. ſq, r. r. ſq. N by E. N. ſq. ſq, r. N.		8		17	W 1.29
10	62¼	30.2½	30.2	62	30.1½	ſr. h. N. N by W. h. dr. h. N by W. N. h. c. N. N by E. c. N by E.		4		4	E 1.15
11	61¼	30.1½	30.0½	60¾	30.0	h. N by E. h. ſq. N by E. NNE. ſq. c. NNE. c. f. NNE.		17		1	4. 5
12	60	30.1	30.0¼	59½	29.9¼	h. N by E. h. ſr. N by E. ſr. N. V. hr. V.				25	6.17
13	58¾	30.2	30.1¼	59¼	30.0	r. c. N by W. NNW. c. ſr. c. f. NNW. NW. f. NW. NNW. f. ſq, r. c. NNW. NW by W. W by N. W.		10			8.43
14	58¾	30.3½	30.3¼	59	30.2½	f. WSW. SW by W. c. SW by W. SSW. S by W. c. S by W. V. c. V. WSW. C.		16		16	10. 4
15	60½	30.3	30.2¾	60½	30.1½	f. c. V. c. NW by W. NW. c. NW. WNW. V. c. V. NNW.				32	11.10
16	60½	30.1½	30.1¼	60½	30.0¾	c. N by W. c. f. c. N by W. ſr. c. ſq. c. ſr. N by W. N by E. ſr. c. N by E.		2		9	13.32
17	61	30.2	30.2	61	30.1	c. ſq. ſq, r. N by W. V. NNW. ſq, r. NNW. NW by N. ſq, r. c. NW by N. V. c. NW by N.	8		19		16.29
18	61	30.2½	30.2½	61	30.1½	f. N by E. N by W. f. c. N by W. c. h. N by W. N. V. h. V.	4		9		19. 1

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* A

s.	D.L A.O. N	D.L A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	Longitude from Greenwich D.D T.K.	Longitude from Greenwich D	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W	Magnetical South Dip MD.
	′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°
					W	W	E	E				S	S	W	W	W			
		8		17	1.29	3.14						34· 6	34.11	4.51	8.50*	8. 1*			
					E														
		4		4	1.15	0.26						34· 6	34.15	2. 0			37·	39·	38.
						E								E					
		17		1	4· 5	2.25						34· 1	34.27	0.54	*12.43				
				25	6.17	5· 2						33.47	[34.36]	3.34			39.4	41·	40.2
		10																	
					8.43	7.26						33.37	34.13	6. 3	*16.9				
W by N. W.																			
y W.		16		16	10. 4	9· 3						33.44	34· 4	7.43	16.43*		41.4	43.2	42.3
				32	11.10	10.41						33.49	34· 9	9.24			41.4	43.4	42 4
		2		9	13.32	13 12	94	11.38	4	⊙	13	33.53	34.15	11.58	18.18*	17.52*	42.6	44·	43.3
	8		19		16.29	15.50	75	14.35	1	⊙	Var. 5°.	34· 1	34.15	14.39	19.39*	19.56*	43.4	45.2	44 3
	4		9		19· 1	18.13						34· 5	34.15	17· 5	20.50* *22. 0	20.47*	45.6	46.4	46.1

ROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

	Magnetical									
	Variation		South Dip							
			Face							
	Az.	Amp.	E.	W	MD.	C.D.		ML.	
	° ′	° ′	°	°	°	°		7222	
1	W 8.50*	W 8. 1*						122	First, moderate breezes and fair. Latter, fresh gales, with squalls and rain. Bar. 8 P.M. 30.1. 9. 30.0¾. 11. 30.0. 12½. 30.0 6 A.M. 29.9½. 8. 29.9½. 9½. 30.0½.
0			37.	39.	38.	38.6	Very unsteady.	136	Major part, fresh gales. Bar. 2½ P.M. 30.0¼. 5. 30.0¾. 7. 30.1. 8. 30.1¼. 11½. 30.1¼. 6 A.M. 30.2. 9. 30.2 Two black alcatrasses. A.M. a few pintado birds and som silver birds.
4	*12.43							140	Fresh gales, with squally weather and a large sea. Bar. 9 P.M. 30.2. 11. 30.1½. 9. A.M. 30.1. 10. 30.0½. A.M. many pintado birds, sheerwaters, &c. one alcatrass.
4			39.4	41.	40.2	41.	Unsteady.	110	Most part, fresh breezes and hazy. Bar. 1 to 10 P.M. 30.0¼ to 30.0½. 8 A.M. 30.0¼. 9. 30.0½. A.M. several poor Johns. some sheerwaters, and a young alcatrass, but no pintado birds.
3	*16.9							122	Most part, fresh gales with some rain. Bar. 1 P.M. 30.0. 4. 30.0¼. 8. 30.0¼. 8 A.M. 30.0½. 9. 30.0¾. 11. 30.1½ Several poor Johns, sheerwaters; and A.M. a few pintados.
3	16.43*		41.4	43.2	42.3	43.1	Very steady.	67	First part, fresh breezes. Latter, light airs. Bar. 8 PM. 30.1¼. 12. 30.2½. 9 A.M. 30.3¼. 12. 30.3¾. A.M. some porpoises.
4			41.4	43.4	42 4	43 2	Extremely steady.	55	First part, variable. Latter, an increasing gale from NW. with cloudy weather. Bar. 9 P.M. 30.3¼. 11. 30.3.
3	18.18*	17.52*	42.6	44.	43.3	44.	Very steady.	119	Moderate gales, with some light squalls and smooth water. Bar. 4 P.M. 30.2½. 6. 30.2. 10. 30.2¼. 12. 30.2. 8 A.M. 30.1½. 11. 30.1¼. A.M. some pintado birds, and several silver birds, some setting on the water, others flying about.
9	19.39*	19.56*	43.4	45.2	44 3	45.	Not very steady.	146	Fresh gales throughout, with cloudy weather and some squalls. P.M. large black alcatrass. A.M. some pintado birds, sheerwaters, &c. Bar. 3 P.M. 30.1¼. 9. 30.1¼. 12. 30.1½. 7 A.M. 30.1½. 9. 30.1¾
5	20.50* *22. 0	20.47*	45.6	46.4	46.1	46.6		126	Pleasant breeze and mostly hazy. Several pintado birds. A.M. two birds, somewhat larger than silver birds, with swallow-tails flying above the ship; also a Cape hen, and several grampusses. Bar. 9 P.M. 30.2½. 12. 30.2¼ 9 A.M. 30.2½
								8365	

1775	T.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitude A.	Longitude T
	°	In. Dec.	In. Dec.	°	In. Dec.		′	′	′	′	° ′ E	°
Aug. 19	60¼	30.1	30.0	60½	30.0	h. N by E. WNW. NW by N. h. dr. NW by N. WNW. dr. fr. WNW. V. fr. V.	7			8	19.49	1
20	61	30.0½	30.0½	60½	29.9½	h. NNW. h. NNW. N. V. NE by N. h. N by E. N. NNE. h. N by E. NE.						
21												

e Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* AL

	D. L. A. O.		D. L. A. T. K.		Longitude from Greenwich							Latitude		Cor Long.	Magnetical				
															Variation		South Dip		
																	Face		
	N	S	W	E	A.	T.K.	D. ☾ T.K.	☾	S.	O.	E. D.	A.	O.		Az.	Amp.	E.		MD.
	′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	°	° ′	° ′	°	°	°
					E	E		E				S	S	E	W	W			
V by N.	7			8	19.49	19. 9						34.19	34.22	18. 6			45.2	46.6	46.
by N.													34.15			22.31*	45.6	45.6	45.6
																	45.2	46.4	45.7

or ng.	Magnetical Variation Az.	Magnetical Variation Amp.	South Dip Face E.	South Dip Face .	South Dip MD.	South Dip C.D.		ML.	
	° ′	° ′	°	°	°	°			
.	W	W						8365	Moſt part, light breezes and hazy. At 2 P.M. ſaw the land from maſt-head ESE. per compaſs. At 5½ h. Peaked hum of Cape Good Hope, S 52°.48′ E Hum. miſtaken for Cape, S 57. E L. ext. Table Land, E 4. N L. ext. in ſight, E 19. N
. 6			45.2	46.6	46.	46.5	Very ſteady.	44	At Sun-riſe Sugar Loaf, N 69°. E Table Land, N 73. E Cape Good Hope, S 60. E At noon L. ext. N 55. E Cape Good Hope, S 61. E Longitude per T.K. 19°. 9′ E Cape *Good Hope* per chart, 0.21 E Longitude of *Cape* per T.K. 19.30 True longitude of *Cape*, 18.27 Error of T.K. 1. 3
		22.31*	45.6	45.6	45.6	46.3	Perfectly ſteady.	70	Major part, moderate and hazy. In Falſe Bay. At 4 h. Cape Good Hope, E 16°. S. Sunſet * L. ext. N 21°. E. R 2.18 Bluff Point in one with Hummock. 72.30 Cape Good Hope * 2d. 86. 6 Hanglip. * 2d Cape Good Hope. L 24.30 Hummock, called *Cape* laſt night. 7. 0 Hummock. 1.50 Outer Hummock and higheſt part diſt. Ridge. R 13.48 Hanglip. Bellows, E 15°. S. Sunriſe, Hanglip, S 47°. E. Cape Good Hope, S 36°. W. White Sand Hills in Symmon's Bay, N 33°. W. At noon Hanglip Point, S 35°. E Cape Good Hope, S 50. W Noah's Ark, NW about 4′ diſt. N. B. All theſe bearings are by compaſs, without allowing for variation.
			45.2	46.4	45.7	46.4	Very ſteady.	8479	At 4 P.M. being calm, hoiſted out the pinnace, and towed in towards the harbour. At 7 anchored in 20 fath. Noah's Ark W. Roman Rock NW ½ W diſt. about two miles.

Aug. 21	Strong gales and squally.	S. S by E.	At 4 A.M. found ship drove, veered to a wh
22	Fresh gales with hard squalls. P.M. increasing.	S by E.	
23	Strong gales and excessive hard squalls. Towards midnight began to moderate.		At 8, gale increasing, swayed up lower yard
24	Moderate and fair.	SE.	At 1 P.M. anchored in Symmon's Bay, in 7
25	Moderate and cloudy.	NW.	
26	Fresh breezes, with some rain.	W. SW.	
27	Light breezes mostly from SE. with fair weather.	SE.	
28	Light breezes and fair.	V.	Sailed a Dutch snow.
29	First and middle, moderate and cloudy, with some rain.	NW to W.	Sailed La Bretagne, Capt. MANSON for Mau
	Latter, squally.	SW.	
30	Strong gales and clear weather.	SSE.	Returned.
Sept. 1	Moderate and fair for most part, and a swell.	SE.	
2	Strong gales and hard squalls.	NW.	
3	Major part, squally with rain. Towards evening, light breezes and fair.	NW.	Sailed again.
4	Moderate and fair.	V.	
5	Strong gales and very hard squalls; could not send a boat ashore.	S by E.	
6	Moderate and fair.	V.	
7	Mostly light breezes.	V.	Sent long-boat to endeavour taking up the an
	P.M. a fresh gale.	Wy.	
8	Moderate breezes.	SW.	
9	Moderate and fair.	V.	
10	Strong gales and hard squalls.	S by E.	
11	Light winds from Southward, and fair weather.	Sy.	
12	Fair.	V.	
13	Fair.	V.	
14	Light airs and	C.	Sailed the Anson, Capt. TRYON, for Englan
15	First part, calm. Latter part, breezes.	C. Wy.	Sent long-boat again to try for the anchor, b
16	Fair.	V.	
17	Strong gales, with rainy weather.	NW.	
18	Fresh gales.	NW.	

to The Eaſt Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept*

A.M. found ſhip drove, veered to a whole cable; got down top-gallant yards, lowered fore and main yards, and got ſhee

gale increaſing, ſwayed up lower yards. At noon, cloſe reefed top-ſails, ſtopt the cable, and came to ſail.

P.M. anchored in Symmon's Bay, in 7½ fath. when moored, lower flag ſtaff from Point WSW. Dolphin's Noſe NE. R

a Dutch ſnow.

La Bretagne, Capt. MANSON for Mauritius.

ned.

again.

ong-boat to endeavour taking up the anchor: returned with 80 fathoms of cable, but could not weigh the anchor.

the Anſon, Capt. TRYON, for England.

ong-boat again to try for the anchor, but could not purchaſe it.

ABERCROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

ered fore and main yards, and got ſheet anchor overſide.

cable, and came to ſail.

Point WSW. Dolphin's Noſe NE. Roman Rocks E½S. Noah's Ark SE. Hanglip SE¼S off ſhore ¾ of a mile.

t could not weigh the anchor.

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th.	Marine Barometer D.	Weather and Winds.	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longi A.
		In.Dec.	In.Dec	°	In.Dec.		′	′	′	′	° ′ E
Sept. 19	59		30.1	59		f. NW. NW by W. c. f. NW by W. WNW. f. C. c. C. E. C. WNW. NW.					18.43
20	59¼		30.0¾	59		c. NW. NW by N. c. sq. NW by N. N by W. sq. c. N by W. NNW. c. sq. sq, r. NNW.	4				21.26
21	57½		30.1½	57¾		c. NW by W. WNW. W by S. c. sq. c. W by S. W. c. W. W by S. c. sq. sq, r. W by S.	8				24.22
22	62		30.2½	62		sq. W by S. SW. c. f. S by W. S. f. c. S. C. V. c. f. NE. NE by E. ENE.	10		49		25.36
23	66½		29.6¾	66		f. NE by E. ENE. f. NE by E. f. NE by E. f. ENE. NE by E.	6				27. 8
24	65		29.5½	65		h. NE by E. h. NE by E. NE by N. V. h. c. V. W. c. W. WNW. NW by W.		9			28.13
25	58½		29.7	58½		c. W by N. V. W by N. c. h. c. r. c. W by N. WNW. V. NW. c. r. NW. V. r. sq. WSW.	15				29.35
26	61	29.9½	29.9	61	29.8½	sq. WSW. sq. sq, sr. sq. WSW. SW by W. c. r. SW by W. W by S. W by N. r. W by N. WNW.	21			31	32. 9
27	62½	30.1½	30.1¼	62½	30.0¾	c. N by W. c. sq, r. N by W. NNW. sq, r. h. NNW. W by N. sq. c. W by N. W. WNW.	1				35.18

to The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* ALEX

	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D. ☽ T.K.	Longitude from Greenwich ☽	S.	O.	E D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical South D. Face E.	Magnetical South D. Face W.	Magnetical South D. M
	′	′	′	′	° ′ E	° ′ E	′	° ′			′	° ′ S	° ′ S	° ′ E	° ′ W	′ ° W	°	°	°
NW.					18.43	18.52							34.48	18.52					
	4				21.26							35.59	35.55	[21.15]					
W by S.	8				24.22							36.21	36. 9	[24. 1]					
	10		49		25.36							36.37	36.15	[25. 5]					
	6				27. 8							37.34	37. 6	[26.27]					
v. W.		9			28.13	27.23						37.58	37.39	27.23					
NW.	15				29.35							37.32	36.58	[29. 0]					
W by N.	21			31	32. 9	31.50						37. 1	36. 6	31.50			52.4	53.4	53
	1				35.18							36.40	35.24	[34.55]					

r. ng.	Magnetical Variation. Az.	Amp.	South Dip Face E.	W.	MD.	C.D.		M L.	*Cape* of GOOD HOPE lat. 34.22 S. long. 18.27 E.
′	° ′ W	′ ° W	°	°	°	°			
·52								17	At Sun-set, Cape Good Hope NW=WNW. Table Land N by W=NW by N. Hanglip E 7 N=E 29½ N. Eastern ext. in sight E5°S=E 17½ N distance 6 leagues from nearest land. At Sun-rise, Cape Good Hope N by W½W=NW½N 9 or 10 leagues. Hanglip Point NE=NNE. Ext. to Ed. ESE=E. Saw a sail, supposed the Gatton, come round from Table Bay, to join us. At noon, Cape Good Hope N per comp. =N 22½ W. Hanglip N 35 E=N 12½ E 9 leagues. Eastern ext. N 80 E=N 57½ E. Major part, light breezes and fair weather, with great swell from SW.
·15]								154	Fresh gale, with a very large sea. Bar. 9 P.M. 30.1. 8 A.M. 30.1.
· 1]								144	Fresh gales and great swell. Bar. 8 P.M. 30.1. 8 A.M. 30.1.
· 5]								66	First part, decreasing gale. Middle, calm. Latter part, a breeze from the NE. Great swell. A.M. bar. 30.3. N.B. it was not observed at noon. Past 1 P.M. it was 30.2½ Many alcatrasses, pettrils, pintado birds, &c.
·27]								92	First part, fresh gales. Latter, hard gales, with great and confused sea, Mostly fair weather. 2 P.M. bar. 30.2½. 9. 30.1. 11. 30.0. 8½ A.M. 29.8. Many pettrils, pintado birds, &c.
·23								58	First part, hard gales from Nd. Latter, from Wd. with a very large NE swell, confused in heaps. Many alcatrasses, pettrils, pintado birds, &c. Bar. 29.6 to 29.5½.
· 0]								69	First part, light breezes. Latter part, fresh breezes. A.M. swell much abated. Many alcatrasses, pintado birds, pettrils, &c. Bar. 2 P.M. 29 5¾. 3. 29.6. 12. 29.6. 8 A.M. 29.6½. 9. 29.6¾.
·50			52.4	53.4	53.	53.4	Not very steady.	127	Strong gales, mostly Wd. with squalls and some rain. Many alcatrasses, pintado birds, &c. and great many pettrils. Bar. 2 P.M. 29.6½. 4. 29.7. 6. 29.8. 9. 29.8½. 8 A.M. 29.9. 9. 29.9¼. 11. 29.9¼.
·55]								158	First part, fresh gales and squalls. Latter, moderate. A great swell. Many alcatrasses, pintado birds, pettrils, &c. Bar. 4 P.M. 29.8½. 6. 29.9. 9. 29.9. 12. 29.9. 8 A.M. 30.1. 9. 30.1¼. 11. 30.1¼.
								885	

1775	Th.	Marine Barometer, R.	S.	Th.	D.	Weather and Winds.		D.L A.O. N	S	D.L. A. T.K W	E	Longitud A.	
	°	In.Dec.	In.Dec.	°	In.Dec			′	′	′	′	° ′	°
Sept. 28	62¾	30.3	30.2¾	62½	30.2	h. ſq, r. r. r. h. h. h.	W by N. W. W by N. W by N. NW by W. V. NW by W.		1	9		E 36.54	3
29	67¼	29 9½	29.9¼	67	29.9	f. f. ſq. h. ſq. c. c.	NW by N. N by W. N by W. V. N by E. N by E. N. N. N by E.	4			27	39.48	3
30	56½	30.2	30.1¾	56½	30.1¼	c. hſq, r, L, Th. L. to sw. c. c. ſq, r. ſq, r. h. c.	N by E. N. V. V. W. W by S. W by S. SW by W. SW.	20			6	42.52	4
Oct. 1	61¼	30.3¼	30.3	61	30.2½	h. c. c. c. c.	WSW. S by W. S. S. SSE. S by E. SE. SE by E. SE by S. SE. C. E.	19			12	43.59	
2	65½	30.1¾	30.1¾	65	30.1	c. ſr. ſr. c. ſq. h. h. h.	E by S. E. V. V. ESE. E. ENE. NE. NE. NE by N.					45.24	4
3	67¼	30.3	30.2¾	67	30.2	f. f. h. f. f. ſq. h. h. f.	NE. NE. NE. NE. NE by E.		2		3	47.36	4
4	66½	30.3¼	30.2¾	66	30.2½	h. h. h. h.	NE by E. NE. NNE. NNE.		2		6	50.15	5
5	67	30.2½	30.2¼	67	30 1¾	h. h. h. ſq. c. c.	NE by N. NE by N. NE by N. N. N.	2			1	53. 8	5
6	62¼	30.2	30.1¾	62	30.1¼	h. h. h. h. c.	N by W. N by W. NNW. NNW. NW. NW. WNW. NW. V. S by E. SSE.	12			20	55.14	5
7	62½	30.3¾	30.3¾	62	30.2½	c. ſq. r. r. h. h. f. f.	SE by E. V. SSE. ESE. SE by S. S by E. S. S by W. S by W. V.	17			13	56.11	5

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

s.	D.L A.O. N	D.L A.O. S	D.L. A. T.K W	D.L. A. T.K E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D.☽ T.K.	Longitude from Greenwich ☽	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W	Magnetical South Dip MD.
	′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°
			9		E	E	E	E				S	S	E	W	W			
		1			36.54	36.26						36. 3	34.49	36.26		27.30*	57.4	58.4	58.
.	4			27	39.48	39 47						35.49	34.31	39.47	27.43*				
sw.	20			6	42.52	42.57						35.34	33.56	42.57					
s.	19				43.59							35.22	33 25	[44.10]					
				12															
					45.24	45.41	9 59W	45.32 46.40	6 3	☉ *An.	26 21	35.55	33.58	45.41					59or60
		2		3	47.36	47.56	32E	47.24	5	☉	38	36. 6	34.11	47.56	26.49*		59.	60.	59 4
		2		6	50.15	50.41	34W	51.15	3	☉	26	36.13	34.20	50.41					
	2			1	53. 8	53.35						36.11	34.16	53.35	25.57*	25.39*			
S by E. SSE.	12			20	55.14	56. 1						36. 4	33.57	56. 1	24.42*		59.4	61.	60.2
E. S.	17			13	56.11	57.11	26E	56.45	4	*An.	23	35.49	33.25	57.11					

CROMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

r. . g.	Magnetical: Variation: Az.	Variation: Amp.	South Dip: Face E.	Face W.	MD.	C.D.		ML.	G denotes *Capt. Money's* Observations in the *Gatton*, the longitude reduced to *noon*.
′	° ′ W	° ′ W	°	°	°	°		885	
26		27.30*	57.4	58.4	58.	58.4	Very unsteady.	86	Pleasant breeze. Many alcatrasses, pintado birds, pettrils, &c. Bar. 3 P.M. 30.1½. 6. 30.2. 10. 30.2½. 12. 30.2½. 8 A.M. 30.2¾.
47	27.43*							144	Major part, fresh gales. Many alcatrasses, pintado birds, pettrils, &c. Gatton, var. az. 28° 13′* W. Bar. 1 P.M. 30.2¾. 5. 30.1¾. 9. 30.1. 12. 30.0½. 6 A.M. 29.9¾. 8. 29.9½. 10. 29.9½.
57								153	First and middle, fresh gales, with hard squalls, thunder, lightning, and rain. Latter, blowing fresh and hazy weather. Many pettrils, pintado birds, &c. and A.M. one silver bird. Bar. 2 P.M. 29.8¾. 4½. 29.8¼. 5¾. 29.7½. 6. 29.7¾. 8¼. 29.8¼. 9¾. 29.9. 11. 29.3.
0]								64	First part, fresh gales. Latter, light breezes and calm. A.M. many alcatrasses, &c. Bar. 2½ P.M. 30.2. 5. 30.2. 9. 30.3. 12. 30.3. 6 A.M. 30.3½. 8. 30.3¼. 11¼. 30.3.
41					59or60		Extremely unsteady.	85	First part, light breeze. Latter, fresh. P.M. many alcatrasses, &c. G long. ☉ and ☾, 45° 31′ E. Bar. 5½ P.M. 30.3. 8. 30.3. 12. 30.2. 8 A.M. 30.1½.
56	26.49*		59.	60.	59 4	60.	Very unsteady.	110	Moderate breezes throughout, weather changeable. Few birds, great dews, and water remarkably smooth. G var. 4 az. 26° 46′*, amp. 26° 47′*. Bar. 2 P.M. 30.1½. 6. 30.1¾. 12. 30.2¼. 8 A.M. 30.2½. 9¼. 30.3.
41							*Larboard-side of cabbin.*	132	Mostly fresh gales. Some pintado birds. A.M. great dews; water smooth. G long. ☉ and ☾ 50° 39′ E. Bar. 1½ P.M. 30.2½. 4. 30.2¼. 7¾. 30.2. 12. 30.2. 6 A.M. 30.2¾. 9. 30.3.
35	25.57*	25.39*						143	Fresh breezes. Some pintado birds. A.M. one pettril. G var. 4 az. 26° 9′*, amp. 26° 7′*. Bar. 2 P.M. 30.2¼. 6. 30.2¼. 6 A.M. 30.1¾. 8. 30.2. 9½. 30.2¼.
1	24.42*		59.4	61.	60.2	60.6	Very steady.	106	First part, fresh gales. Latter, light and variable. P.M. an alcatras. A.M. several alcatrasses and pintado birds. G var. 2 az. 24° 42′*. Bar. 1¾ P.M. 30.2. 4. 30.1¾. 6. 30.1¾. 10. 30. ¾. 12. 30.1¼. 8 A.M. 30 1¾. 9. 30.2.
1								53	First and middle, light breezes and rain. Latter, light breezes and fair weather. P.M. *a turtle passed*; several alcatrasses and other birds. Bar. 2½ P.M. 30.1¾. 5. 30.1¾. 6. 30.2. 9½. 30.2½. 12. 30.2½. 8 A.M. 30.2¾.
								1961	

1775	Th.	Marine Barometer. R.	S.	Th.	D.	Weather and Winds.		D.L. A.O. N	S	D.L. A. T.K. W	E	Longitud A.
	°	In.Dec.	In.Dec.	°	In.Dec.			°	′	′	′	° ′
Oct. 8	61½	30.3½	30.3	61	30.2½	c.	SW. V.					E
						c.	C. V.		2		23	56.32
						f.	V. W.					
						f.	V. NW by W.					
9	63½	30.4¼	30.3¾	63	30 3¼	f.	NW by W. WNW. W by N.					
						f.	W by N. WSW.	13			12	58.18
						f.	WSW. SW by W.					
						f. h.	SW by W. V.					
10	61½	30.4½	30.4	61¼	30.3½	h. f.	S by W. S by E. SSE.					
						f.	V. SE by S. S by E.	5			1	58.46
						f.	S by E. C.					
						f.	WNW. NW. WNW.					
11	62½	30 3¼	30.2¾	62¼	30.2½	f.	NW by W.					
						f. c.	NW by W.	6			27	60.18
						c.	NW by W. WNW.					
						c. f.	WNW.					
12	64¼	30.3¼	30.3	64	30.2½	f.	WNW.					
						f.	WNW.	4			12	61.39
						f. h. c.	WNW.					
						c.	WNW.					
13	65¼	30.2¼	30.1¼	65	30.1¼	h.	NW by N. NNE.					
						h.	NNE. N by E.		2		10	63.34
						h. c.	N by E.					
						c. sq. c.	N by E.					
14	66	30.3	30.2½	65½	30.2	h.	N by E.					
						h.	N by E. NNE.	2			21	65. 6
						h.	NNE.					
						h.	NNE. NE by N.					
15	64¼	30.0	29.9½	63½	29.8½	f.	NNE. NE.					
						f. sq.	NE.					67.26
						sq. h.	NE. NE by N. NNE.					
						h. sq.	NNE.		24		24	
16	59	30.3	30.2½	59	30.2	sq, r. r. h.	NNE. V. N.					
						h.	N. NNW. NW.					69.34
						h. c.	NW. W by S. SW by S.					
						c.	SW by S. S by W.					
17	62¼	30.4¾	30.4¼	62¼	30.2½	c.	SSE.					
						c.	SSE. SE by S.	11		5		70.30
						c.	SE by S. ESE. V.					
						c.	V. C.					

The East-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* ALEXA

	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D. ☽ T.K.	Longitude from Greenwich ☽	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W.	Magnetical South Dip MD.
	′	′	′	′	° ′	° ′	′	° ′			′	° ′	° ′	° ′	° ′	′ °	°	°	°
					E	E	E	E				S	S	E	W	W	61.	63.	62.
		2		23	56.32	57.55						35.50	33.28	57.55	23.48*	24. 2*	61.4	62.	61.6
W by N.	13			12	58.18	59.53	4	59.49	5	A *	32	36. 5	33.30	59.53	23.49*	23.57*	61.4	62.2	61.7
	5			1	58.46	60.22	45	59.37	6	A *	28	36. 0	33.20	60.22	21.43*	21.52*	61.4	62.4	62.
	6			27	60.18	62.21						36. 6	33.20	62.21	23.10*	22.47*	61.4	62.4	62.
	4			12	61.39	63.54						36.10	33.20	63.54	21. 5*	20.51*	62.2	63.2	62.6
		2		10	63.34	65.59						36.14	33.26	65.59	20.27*	20.34*	62.4	63.2	62.7
	2			21	65. 6	67.52	W 25	68.17	5	☉	27	36. 4	33.14	67.52	19.35*		61.6	62.4	62.1
					67.26							35.55	[33.17]	[70.24]	18.43*				
		24		24															
S.					69.34	72.44	E 35	72. 9	2	☉	19	35. 4	32.38	72.44			61.4	62.2	61.7
	11		5		70.30	73.35						34.57	31.41	73.35					

g.	Magnetical: Variation. Az.	Variation. Amp.	South Dip. Face E.	Face W.	MD.	C.D.		ML.	
	° ′ W	′ ° W	°	°	°	°		1961	
55	23.48*	24. 2*	61.	63.	62.	62.4	Pretty steady. *Larboard-side of cabbin.*		
			61.4	62.	61.6	62.2	Ditto. *Starboard-side of cabbin.*	21	Mostly light airs and calms, with large swell from SW. Few birds. G var. 3 az. 23° 32′*, amp. 23°50′*. Bar. 6 P.M. 30.3¼. 8 A.M. 30.3¼. 10. 30.3¼.
53	23.49*	23.57*	61.4	62.2	61.7	62.3	Very steady.	89	Major part, pleasant breezes and fair weather. Just before noon a *seal* passed close to the ship on the larboard side, at same time a flock of a vast number of *small white birds* at some distance on starboard quarter. G var. 2 az. 23° 25′*. Bar 2½ P.M. 30.3. 7. 30.2¾. 1 A.M. 30.3¼. 9. 30.3½.
22	21.43*	21.52*	61.4	62.4	62.	62.4	Pretty steady.	24	Mostly light airs, with a large swell from Wd. P.M. a *grampus* very near the ship. Several alcatrasses, &c. G var. az. 22°19′*, amp. 22°23′*.
21	23.10*	22.47*	61.4	62.4	62.	62.4	Not very steady.	77	Pleasant breezes. Some pintado birds, &c. smooth water, but a long swell from SW. G var. az. 22° 30′*, amp. 22° 45′*.
54	21. 5*	20.51*	62.2	63.2	62.6	63.2	Very steady.	68	First part, pleasant breezes. Latter, light airs, with great swell from SW. Some pintado birds, &c. Bar. 2 P.M. 30.2¾. 11½. 30.2¾. 8½ A.M. 30.3.
59	20.27*	20.34*	62.4	63.2	62.7	63.3	Not very steady.	96	First part, light breezes. Latter, moderate. Several pintado birds. A.M. a silver bird and pettril, several poor Johns. G var. 3 az. 21° 28′*, amp. 20° 59′*. Bar. 2 P.M. 30.2¾. 10½. 30.2¾. 1 A.M. 30.2¾.
52	19.35*		61.6	62.4	62.1	62.5	Pretty steady.	78	Pleasant breeze. Great dews. G long. ☉ and ☽ 67° 56′. Bar. 6 P.M. 30.2. 11. 30.2¾. 12. 30.2½. 8 A.M. 30.2½.
24	18.43*							117	First part, moderate. Latter, fresh gales and squally. Very damp weather. G var. 2 az. 19° 23′*, amp. 19° 43′. Bar. 6 P.M. 30.2. 12. 30.1¼. 9 A.M. 29.9½.
44			61.4	62.2	61.7	62.3	Not steady.	120	Fresh gales, with squally weather. A.M. many pintado birds, some alcatrasses, &c. Bar. 2 P.M. 29.8½. 4. 29.8¼. 6. 29.7¾. 10. 29.8½. 12. 29.9. 7½ A.M. 30.1½. 9. 30.2. 10. 30.2.
35								66 / 2717	First part, moderate. Latter, light airs inclinable to calm, with a great swell. Several pintado birds, some alcatrasses, &c. At night, water luminous like blubbers. Bar. 2 P.M. 30.2¾. 4½. 30.3. 6. 30.3. 10. 30.3½. 12. 30.4. 8 A.M. 30.4. 9. 30.4½. 10. 30.4½.

1775	Th.	Marine Barometer. R.	S.	Th.	D.	Weather and Winds.	D.L. A.O. N	S	D.L. A.T.K. W	E	Longitude A.
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′	′	° ′ E
Oct. 18	63¼	30.4¼	30.4	63	30.3¼	f. c. c. c. h. c. c.	V. C. C. E by N. V. NE. V. NE by E. NE. V. V. N by E.		6		70.32
19	66½	30.4	30.4	66½	30.3	h. c. c. c. c.	NNE. N. N by E. NE. NNE. N by E. NNE. NE. NE. NE by N. NNE. NE by N. N by E.		5	10	71.18
20	65		30.3	64¼		f. f. f. f.	NE by N. NE by N. N by E. N. NNE. NNE. N by E. N.		1	8	72.21
21	63¼	30.2½	30.2	64¼	30.1¼	f. f. c. c. sq. c. c. sq, r.	N. N by W. N by W. NNW. NW by N. NW by N. NW. V. SW by S.	10		22	73.16
22	61¾	30.4	30.3½	61½	30.3	f. f. c. c.	SSW. SSW. S by E. SSE. SSE. SE.	7	15		74.46
23	66	30.3¾	30.3¼	66	30.3	c. c. c. sq. sq. c.	SE by E. ESE. E. E. V. E by N. E by N.	21	4		75. 9
24	71	30.3¾	30.3	71	30.2½	f. f. f. f.	NE by E. NE by E. NE. NE. NE by E. NE by E. V.		3	24	74.43
25	71¼	30.3¾	30.3¼	70½	30.2½	f. f. f. c. c. f.	NE by N. C. ENE. E by S, C. C. C. SW by S. C.		5	2	74.47
26	70¼	30.3¾	30.3	70¼	30.3	h. sq, r. sq, r. sq. c. r. r. sq, r. sq. sq, r.	S by W. S by E. SE. SE. ESE. ESE. V.	8	1		75.43
27	71	30.3	30.2½	70¾	30.2	sq, r. sq. sq. sq, r. sq, r. sq, r. sq.	V. E. E by S. E by S. E by N. E. E by N. E by N. E.	37	4		75.41

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* A

	D.L. A.O. N	D.L. A.O. S	D.L. A.T.K. W	D.L. A.T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	D. ☽ T.K.	☽	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South D Face E.	Magnetical South D Face W	M
	′	′	′	′	° ′ E	° ′ E	′	° ′ E				° ′ S	° ′ S	° ′ E	° ′ W	° ′ W	°	°	°
v.			6		70.32	73.31						34.53	31.37	73.31			61.	62.	61
E. NE.		5		10	71.18	74.27						34.52	31.41	74.27			60.6	61.6	61
		1		8	72.21	75.38	3W 64E 60E	75 41 74.34 74.38	4 4 4	⊙ ⊙ ⊙	37 51 35	34.49	31.39	75.38	14. 9*	14.48*			
SW by S.	10			22	73.16	76.55						33.45	30.25	76.55			59.4	60.4	60
	7		15		74.46	78.10						31.47	28.20	78.10	12.44*	12.49*	58.	58.6	58
	21		4		75. 9	78.29						29.55	26.28	78.29			56.4	57.2	56
		3	24		74.43	77.39						29. 4	25.37	77.39	7.53* * 10.10	8. 1*	56.2	56.6	56
		5		2	74.47	77.45						29. 6	25.44	77.45	10. 3* *9.20	*9. 8	56.2	57.	56
	8		1		75.43	78.40						27.17	23.47	78.40					
	37		4		75.41	78.34						25.49	21.42	78.34					

OMBIE, 1775, *kept by* ALEXANDER DALRYMPLE.

r. ng.	Magnetical: Variation Az.	Variation Amp.	South Dip Face E.	South Dip Face W	MD.	C.D.		ML.	
′	° ′ W	° ′ W	°	°	°	°		2717	
.31			61.	62.	61.4	62.	Pretty steady.	33	Mostly light airs and calm, witha large swell. At night, sea luminous like blubbers. Several alcatrasses, &c. lost sight of Gatton; got sight of her again before noon. Bar. 2 P.M. 30.4. 5½. 30.4. 11. 30.4. 1 A.M. 30.4. 8. 30.4¼. 10. 30.4¼.
.27			60.6	61.6	61.2	61.6	Very steady.	40	Light airs. Sea luminous at night like blubber. P.M. an uncommon bird like Cape hen, some alcatrasses. Bar. 2 P.M. 30.4. 4. 30.4. 10. 30.4. 12½. 30.4. 7½ A.M. 30.3¾. 8½. 30.4. 10. 30.4¼.
.38	14. 9*	14.48*						55	Pleasant breezes. Sea luminous at night like blubbers. A.M. sky mare's tails. No birds. G var. 4 az. 15° 24′*. amp. 15° 2*. Long. ☉ and ☽ 75° 56′. Bar. 2½ P.M. 30.3¾. 11. 30.3¾. 1 A.M. 30.3¾. 8. 30.3½.
.55			59.4	60.4	60.	60.4	Very steady.	84	Moderate breezes. Sea luminous at night like blubbers. Towards evening became cloudy. No birds. G var. 2 az. 14° 10′*. Bar. 2 P.M. 30.3. 6. 30.2½. 8. 30.2½. 10¾. 30.2¾. 12. 30.2½. 8 A.M. 30.2. 9. 30.1¾. 10. 30.2. 11. 30.2½.
.10	12.44*	12.49*	58.	58.6	58.3	58.7	Not steady.	142	Fresh gales. A.M. one or two poor Johns. No other birds. G var. 2 az. 12° 31′*, amp. 12° 51′*. Bar. 2 P.M. 30.2. 4. 30.1¾. 5½. 30.2. 6½. 30.2¼. 10½. 30.2¾. 12. 30.2¾. 9 A.M. 30.3½.
.29			56.4	57.2	56.7	57.3	Very steady.	97	Major part, moderate breezes. P.M. several poor Johns, though slenderer and smaller than usual. A.M. poor Johns, a pettril, and a sheerwater. Bar. 2 P.M. 30.3. 6½. 30.3¼. 12. 30.3½. 8½. 30.3¾. 9. 30.3¾. 10. 30.3¾.
.39	7.53* * 10.10	8. 1*	56.2	56.6	56.4	57.		59	First part, pleasant breeze. Latter, light air and variable. P.M. an alcatrass. A.M. an alcatrass. G var. 2 az. 8° 54′*, amp. 9° 9′*. Bar. 2 P.M. 30.3. 4. 30.2½. 6. 30.3. 7½. 30.3. 11. 30.3.
.45	10. 3* *9.20	*9. 8	56.2	57.	56 5	57.1	Extremely unsteady.	7	Mostly calm. Some birds at distance. G var. az. 8° 38′*. Bar. 2 P.M. 30.3. 8. 30.3. 10. 30.3¼. 8 A.M. 30.3. 8½. 30.3¼. 9. 30.3½.
.40								120	Fresh gales, with squalls and rain; sometimes squalls very hard. Great irregular swell. Several birds, chiefly poor Johns or black sheerwaters, being of the colour of the former, and shape like the latter, but without white breasts. Bar. 2 P.M. 30.3. 5. 30.2¾. 6. 30.2¾. 8. 30.3. 12. 30.2¼. 9 A.M. 30.3.
.34								89	Fresh gales and squally. Several sheerwaters, or birds like them, of different colours, grey, brown, and blackish; some white breasted and white under the wings. Bar. very unsteady these two days from ship's motion. Great irregular sea. Bar. 2 P.M. 30.2¾. 2¾. 30.3. 4. 30.2½. 6. 30.2½. 10. 30.3. 12. 30.3. 8 A.M. 30.2½. 9. 30.2½. 10. 30.2½.
								3443	

1775		Marine Barometer R.	S.	Th.	D.	Weather and Winds.		D. L. A. O. N	S	D. L. A. T. K. W	E	Longitu A.
	°	In. Dec.	In. Dec.	°	In. Dec.			′	′	′	′	° ′ E
Oct. 28	72	30.2½	30.2	72	30.1½	sq. sq, r. sq. sq. c. sq. sq. h.	E. E by S. E by S. ESE. E by S. E by S. ESE.	16			8	76. 9
29	73	30.2½	30.2	73¾	30.1½	c. c. c. sq. h. h. f.	ESE. E by S. ESE. E by S. ESE. E by S. E by S. ESE. E by S.		2	8		76.52
30	75	30.2	30.1½	74½	30.1	f. sq. sq. c. c. c.	ESE. E by S. ESE. E by S. E by S. E by S.	5		15		77.39
31	77	30.1	30.0½	77	30.0	h. h. sq. sq, r. sq. sq.	ESE. E by S. E by S. E by S. E. E. E by N.		3		3	78.10
Nov. 1	78	30.1	30.0¼	78½	30.0	h. sq, r. sq, r. h. h. sq, hr. sq. c.	E. VE. E. E. VEy. VEy.	1			1	78.17
2	81	30.0¾	30.0¼	81	30.0	h. h. h. h. f.	E by N. E by S. E by N. V. E. E by N. E by N. E.			10		78.26
3	81	30.0½	30.0	80¾	29.9½	f. c. c. c. f. f.	E. E. E. E.	5		9		79. 5
4	82	30.0½	29.9¾	82	29.9¼	f. c. c. f. f. f.	E. E by S. E. E. E. E.	5		13		79.36
5	82	30.0	29.9½	81½	29.9	h. h. h. f. f.	E. E. E. V. E. E.	7		18		80.19

ne Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* AL

	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	Longitude from Greenwich D. ☾ T.K.	Longitude from Greenwich ☾	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South Di Face E.	Magnetical South Di Face W.	Magnetical South Di MI
	′	′	′	′	° ′ E	° ′ E	′ E	° ′ E				° ′ S	° ′ S	° ′ E	° ′ W	° ′ W	°	°	°
	16			8	76. 9	79.10						24.17	19.54	79. 4					
		2	8		76.52	79.45	35 56	79.10 78.49	4 4	⊙ ⊙	27 10	22.54	18.33	79.33					
	5		15		77.39	80.17						21.11	16.45	79.59		4. 4*	46.2	47.2	46.6
		3		3	78.10	80.51						19. 8	14.45	80.27	*3.17		44.	45.	44.4
	1			1	78.17	80.59						17.15	12.51	80.29			41.	42.	41.4
			10		78.26	80.58	114 108	79. 4 79.10	8 6	⊙ ⊙	42 30	15.44	11.20	80.22	1.20* *1.12	*1.42	38.6	39.4	39.1
	5		9		79. 5	81.28						13.47	9.18	80.46	0.59*		35 4	36.4	36.
	5		13		79.36	81.46	82 41	80.24 81. 5	6 6	*At. A *	17 28	11.57	7.23	80.58	0. 3*		32.6	33.6	33.2
	7		18		80.19	82.11						10. 5	5.26	81.17	*0. 8		29.2	29.6	29.4

r. ng.	Magnetical Variation Az.	Variation Amp.	South Dip Face E.	South Dip Face W.	MD.	C.D.		ML.	
′	° ′ W	° ′ W	°	°	°	°		3443	
4								96	Mostly fresh gales from Eastward, with squalls and rain and a large swell. Several birds as before. A.M. many flying fish. Bar. very unsteady, 1 P.M. 30.2½. 4. 30.1½. 5¼. 30.2. 6. 30.2. 8. 30.2¼. 10. 30.2½. 12. 30.2½. 9 A.M. 30.2½.
33								93	Fresh gales, with some squalls. Several birds as before. P.M. a large white bird which flapped its wings and flew high, unlike the birds which are found in the main sea. G long. ☉ and ☾ 77° 39′ E. Bar, 2 P.M. 30.1¼. 4. 30.1½. 6. 30.1½. 10. 30.2. 11½. 30.2. 8 A.M. 30.2¼. 9. 30.2¼. 10. 30.2½.
59		4. 4*	46.2	47.2	46.6	47.3	Unsteady.	113	Strong gales, with frequent squalls. Some birds as before. Vast flocks of flying fish. Swell abated. Bar. 2 P.M. 30.2. 3. 30.1¼. 4. 30.1½. 10½. 30.2. 12½. 30.2. 8 A.M. 30.1½. 9. 30.1½.
27	*3.17		44.	45.	44.4	45.1	Ditto.	127	Squally. Few birds as before. Swell increased and weather unsettled. G long. ☉ and ☽ 79° 8′ E. Bar. 2 P.M. 30.1. 4. 30.1. 6. 30.0¾. 10. 30.1. 12½. 30.1. 6 A.M. 30.0½. 8. 30.0¾. 9. 30.0¾. 10½. 30.0½.
29			41.	42.	41.4	42.1	Very steady.	114	Squally. P.M. a tropic bird, which resembles a paroquet in shape, but is of a whitish grey. Swell much abated. G long. ☉ and ☾ 79° 10′ E. Bar. 2 P.M. 29.9¾. 4. 30.0. 6. 30.0. 9½. 30.0¼. 12½. 30.0. 9 A.M. 30.0¼.
22	1.20* *1.12	*1.42	38.6	39.4	39.1	39.7	Unsteady.	92	Moderate breezes, with some squalls. A.M. few birds; the grey white under wings; frequently overcast. A.M. a little more swell from Northward. G var. 2° 3′*, amp. 2° 4′*. Bar. 2½ P.M. 29.9¾. 6. 30.0. 12¼. 30.0¼. 8 A.M. 30.0¼. 9½. 30.0¼. 11½. 30.0½.
46	0.59*		35 4	36.4	36.	36.6	Not steady.	123	Pleasant gale, with fair weather. A.M. a bird, larger than a tropic bird, with black wings and white body at a distance, it flapped the wings very much. A head swell. C var. az. 1° 0′*, 0° 52′*. Bar. 2 P.M. 30.0¼. 6. 30.0¼. 7½ A.M. 30.0½.
38	0. 3*		32.6	33.6	33.2	34.		114	Major part moderate. P.M. some *Southern lights*, very rare and motionless. Bar. 2½ P.M. 29.9½. 6. 29.9¾. 8. 30.0.
47	*0. 8		29.2	29.6	29.4	30 3	Extremely steady.	119 / 4434	Fresh gales, with fair weather. P.M. a large bird of the booby kind above the ship; it had a long neck, and was something in shape and size like a wild goose. At night, *Southern lights*, some diverging in rays downwards, some like a rare cloud, very little motion; a faint ring round ☾. A.M. four tropic birds. G var. 4 az. 0° 21′ *E. az. *0° 4′ E. Bar. 2½ P.M. 29.9½. 6. 29.9¾. 1 A.M. 29.9. 8. 29.9½.

1775	Th.	Marine Barometer. R.	S.	Th.	D.	Weather and Winds.	D.L. A.O. N	S	D.L. A. T.K W	E	Longitude A.	T
	°	In.Dec.	In.Dec	°	In.Dec.		′	′	′	′	° ′ E	°
Nov. 6	2¾	30.0¼	29.9¾	82¼	29.9¼	c. E. c. E. c. E. E by N. E. c. E by N. E.	1		18		80.48	82
7	83	30.0	29.9½	82½	29.9	h. E. E by S. h. E. E by S. h. ESE. c. SE by E.	9		31		81.46	82
8	83¼	30.0¼	29 9¼	82½	29.9¼	h. SE by E. h. E by N. ENE. E. h. sq. E. E by S. f. E by S.	17		20		82.12	82
9	83¾	29.9¾	29.9	83¼	29.8½	f. V. E. f. E by N. E. f. hr. dr. E. E by N. V. c. E.		14	53		82.31	82
10	81¾	29.9¾	29 9	81¼	29.9¾	c. E by S. E. E by S. c. r. c. V. c. V. E by N. E by S. c. sq. E by S. SE by E. SE. SE by E.	3		45		83.19	82
11	83¾	29.9¾	29 9	83½	29.8¾	h. c. SE by E. c. E by S. ESE. E by S. c. E by S. E. E by S. sq, hr. c. ESE. V.	9		33		84. 5	82
12	80¾	29.9½	29.9	80¼	29.8½	sq. r. V. r. L. to nw. f. V. c. sq, r. L. to e. V. E by N. sq. r. V. NE. V.			32		84.25	82
13	82	29 9½	29.8¾	82	29.8½	c. r. c. C. V. C. c. hr. c. L. to s. C. c. C. c. sq, r. c. C. V. NW. V.	2		19		84 33	82
14	82	29.9½	29.8¾	82	29.8½	c. sq, hr. NW by W. V. c. V. NW. C. c. C. V. W by S. c. r. c. W by S. SW. SSW.			2		85. 0	82

to The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* ALEX

	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K W	D.L. A. T.K E	Longitude from Greenwich A.	TK.	D. T.K.	☽	S.	O.	E D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Variation. Amp.	South Dip Face E.	Face W.	MD
	′	′	′	′	° ′ E	° ′ E	′ E	° ′ E				° ′ S	° ′ S	° ′ E	° ′ E	′ ° E	°	°	°
	1		18		80.48	82.22	75	81. 7	5	*F	37	8.24	3.44	81.22	*0. 8		26.2	26.6	26.4
	9		31		81.46	82.49						6.19	2.30	81.43	1.12*	1. 6*	24.4	25.	24.6
	17		20		82.12	82.55						5.17	1.11	81.43			22.	22.2	22.1
		14	53		82.31	82.21						4.20	0.18	81. 3			20.	20 4	20.2
SE by E.	3		45		83.19	82.24						3.18	N 0.47	81. 0	0.52*		19.4	19.	19.4
	9		33		84. 5	82.37						2. 3	2. 1	81. 7			15 4	15 6	15.5
			32		84.25	82.25						1.12	2.52	80.49			15.4	16.	15.6
	2		19		84 33	82.14	95	80.39	3	⊙	28	1.12	2.54	80.32			14.4	15.4	15.
			2		85. 0	82.39						1. 7	2.59	80.51			15.	16.	15.4

or. ong.	Magnetical Variation. Az.	Amp.	South Dip Face E.	W.	MD.	C.D.		ML.	
′ E.	° ′ E	′ ° E	°	°	°	°		4434	
1.22	*0. 8		26.2	26.6	26.4	27.3	Very steady.	101	Moderate breezes. *Northern lights* to Northward. Little motion, but great extent, and afterwards *Southern lights*. G var. amp. 0° 48′ *E. Bar. 2 P.M. 29.9¼. 1 A.M. 29.9½. 9. 30.0.
1.43	1.12*	1. 6*	24.4	25.	24.6	25.5	Not steady, ship laying to for boat.	89	Moderate breezes. G var. az. 0° 45′ *E, amp. 0° 13′ *E. Bar. 2 P.M. 30.0. 6. 29.9½. 1 A.M. 29.9¼. 8. 29.9½.
1.43			22.	22.2	22.1	23.	Extremely steady.	69	Major part, moderate breezes. A.M. came on board from the *Gatton* Major SEARS and Capt. ALCOCK for Madrass, Mr. HORSLEY went aboard that ship for Bombay. Bar. 2 P.M. 29.9. 12. 29.9½. 9 A.M. 29.9¼.
1. 3			20.	20 4	20.2	21.1	Very steady.	61	Variable winds, with rain at times. Bar. 4 P.M. 29.8¼. 9 A.M. 29.7¼.
1. 0	0.52*		19.4	19.	19.4	20.1	Not very steady.	81	Mostly fresh breezes. At 10½ A.M. there was to the SE. the appearance of something black like *a rock*, and at the same time like *a shoal*; but it being to windward, and ship having fresh way, could not determine whether it was *a shoal* or the reflection of the Sun behind the clouds. This is nearly the situation of the *Ouro*. A man sent to mast-head could not see any thing. Bar. 2 P.M. 29.8½. 9. 29.8¾. 12. 29.8¾. 8 A.M. 29.9½.
1. 7			15 4	15 6	15.5	16.4		82	Most part the wind Easterly, with some squalls towards the latter end. Bar. 1 A.M. 29.9. 8. 29.9¼.
0.49			15.4	16.	15.6	16.5	Pretty steady, but ship not having steerage-way.	61	Winds variable with unsettled weather. P.M. a bird like a land bird. A.M. many yellow tails; two black birds at a distance like land birds: a white bird with black wings, like a gull. Bar. 2 P.M. 29.8½. 4. 29.8. 9. 29.9. 12. 29.9. 8 A.M. 29.9¼. 10½. 29.9½. 11. 29.8¾.
0.32			14.4	15.4	15.	15.7	Very steady.	8	Light airs and calms, with hard rain. Many fish, porpoises, &c. A.M. a mottled grey bird of the booby kind. The ☉'s limb not distinct when longitude observed. Bar. 2½ P.M. 29.8½. 12½. 29.8¾. 7½ A.M. 29.8¼. 8½. 29.9¼.
0.51			15.	16.	15.4	16.3	Not very steady.	28	Winds and weather very unsettled. P.M. a sea bird like a plover: many fish. P.M. caught a shark. A.M. saw a sail. Bar. 2 P.M. 29.8½. 4. 29.8¾. 12¾. 29.9. 8 A.M. 29.9½. 11½. 29.9.
								5014	

1775	Th.	Marine Barometer. R.	S.	Th.	D.	Weather and Winds.	D.L. A.O. N	S	D.L. A. T.K. W	E	Longitude A.	T
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′	′	° ′	°
Nov. 15	81¾	29.9½	29.9	81¾	29.8½	c. sq, r. sq, hr. V. c. sq. r. V. W by N. W by S. r. sq, r. c. W by S. SSE. SSW. c. SW.		19	2		E 86. 9	8
16	81	30.0	29.9¼	80½	29 9	c. sq, hr. SW. S. hr. V. S by W. hr. c. S by W. SW. c. r. c. SW.		9		6	87. 5	8
17	80	29.9¾	29.9	80	29.8¾	sq, hr. c. sq. S. V. c. hr. c. sq, hr. S by W. SSE. SE. sq, hr. V. S by E. r. c. S by E. C.	21			18	88. 2	8
18	83½	30.0	29.9¼	83½	29.9	sr. c. C. E. E by S. c. r. E by S. r. c. E. E by N. NE by E. c. sq. NE by E. NE by N. N by E.	6			9	88.16	8
19	83	29.9¾	29.9	83	29.8¾	c.sq,r.sq,th,L,hr.NNW. NW. V. sq. th, L, hr. V. C. V. C. r. c. V. N. c. r. c. N. N by E. NE by N.		18		19	88.57	8
20	82½	30.0	29.9½	82¼	29.9	sq, fr. sq. NE by N. NE. sq.sq,L,hr.hr. NEbyE. EbyN. NEbyE. ENE. NE. hr. sq. V. SE by E. SE. SSE. c. sq, flying sh. SSE. S by W.		30		13	90.27	8
21	80¾	30.0¼	29.9¾	80½	29 9¼	r. SW. V. r, L. to nw. V. C. V. h. V. C. h. r. h. C. V. W. V. N.	15			27	90.54	9
22	81¾	30.0	29.9½	81¾	29.9	c. sq. N. N by W. sq. hr. c. r. N by W. C. SE by S. V. r. V. r. c. NE by E. C.	14			55	91.17	9
23	82		29.9½	82		c. C. E. V. c. V. E by N. c. h. NE by E. NE. h. NE by E. NE. NNE.	6			8	91. 8	9

The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by*

s.	D.L. A.O. N	D.L. A.O. S	D.L. A.T.K. W	D.L. A.T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D.☽ T.K.	Longitude from Greenwich ☽	S.	☉.	E. ☽.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W	Magnetical South Dip MD
	′	′	′	′	° ′	° ′	′	° ′				° ′	° ′	° ′	° ′	° ′	°	°	°
.		19	2		E 86. 9	E 83.46	E	E				S 0.57	N 2.50	E 81.52	W	W	14.4	14.6	14.5
		9		6	87. 5	84.48	76	83.32	4	☉	18	0.46	2.52	82.48			13.4	14.	13.6
	21			18	88. 2	86. 3						0.32	3.27	83.57			14.4	15.2	14.7
N by E.	6			9	88.16	86.26						0. 3	4. 2	84.13			11.1	11.5	11.3
.		18		19	88.57	87.26						0. 3	3.44	85. 7			10.6	11.2	11.
. ENE. NE. E.		30		13	90.27	89. 9						0.17	3. 0	86.40			11.4	12.2	11.7
	15			27	90.54	90. 3						0. 3	3.29	87.28			10.2	10.6	10.4
. V.	14			55	91.17	91.21						N 0. 9	3.55	88.39			10.6	11.2	11.
.	6			8	91. 8	91.20						0.45	4.37	88.31			7.6	8.4	8.1

or. ng.	Magnetical: Variation Az.	Variation Amp.	South Dip Face E.	South Dip Face W	MD.	C.D.		ML.	
′	° ′	° ′	°	°	°	°		5014	
E	W	W							
·52			14.4	14.6	14.5	15.4	Very steady.	71	Mostly variable wind and rain. P.M. a sail; shewed French colours on firing a gun to speak with her, but did not shorten sail. Several birds and many fish. Bar. 2 P.M. 29.8¼. 6. 29.9. 12. 29.9¼. 8 A.M. 29.9¼.
·48			13.4	14.	13.6	14.5		57	First part, mostly squally with very heavy rain. Middle and latter, light airs and cloudy with some rain. ☉'s limb not very distinct when *long.* observed. Bar. 2 P.M. 29.8¼. 4. 29.8¼. 10. 29.9½. 12. 29.9½. 8 A.M. 29.9½. 9. 30.0.
·57			14.4	15.2	14.7	15.6		59	Very unsettled weather with rain. Bar. 1 P.M. 29.9¼. 2. 29.9. 4. 29.9. 9½. 30.0. 1 A.M. 29.9¼. 9. 29.9¼. *At first the dipping-needle had no motion*, but with the face East was at 12°⅘; when moved a little, *it remained motionless*: when moved with the face to West, *the needle turned round, and stood any where.* Moved several times, it pointed with face E 14⅘, W 15⅜. Very steady.
·13			11.1	11.5	11.3	12.2	Pretty steady.	38	Mostly light breezes. P.M. saw two dolphins, heard a tropic bird in night. A.M. caught two dolphins. *Dipping-needle pretty steady, and no appearance of defect as yesterday.* Bar. 2 P.M. 29.8¼. 4. 29.8¼. 12¼ A.M. 29.9. 8. 29.9½. 11. 29.9½.
· 7			10.6	11.2	11.	11.7		44	Variable winds, with rain. P.M. a swallow with short wings and white breast. A.M. a small land bird shaped like a water wag-tail, but in colour like a linnet, with a few yellowish feathers in the flank. A.M. a bird at distance like a gannet. Bar. 2 P.M. 29.8½. 4. 29.8½. 6. 29.8½. 1 A.M. 29.9¼. 8. 29.9¼.
·40			11.4	12.2	11.7	12.6	Not very steady.	102	Fresh breezes, with some squalls and a great deal of rain. The land bird aboard still. P.M. heard a bird, supposed to be a booby. A.M. passed a drift; a grey sea bird shaped like a plover. A black sea bird at a distance. Bar. 1 P.M. 29.8¼. 6. 29.8½. 1 A.M. 29.9. 7½. 29.9½. 9. 29.9½. 10. 29.9¼. 11. 29.9¾. 11¼. 29.9¾.
·28			10.2	10.6	10.4	11 3	Very steady.	30	Variable, with rain and calms. The land bird aboard still. A.M. saw a tropic bird. Passed a drift. Light airs. Bar. ½ P.M. 29.9½. 2. 29.9. 4. 29.9¼. 6. 29.9½. 7. 29.9½. 12½ A.M. 29.9¼. 8. 29.9¼. 10. 30.0.
·39			10.6	11.2	11.	11.7	Very steady, but ship not having steerage way.	30	Major part, light breezes, with some rain. The land bird aboard still. P.M. saw a booby, some fish of the porpoise kind. A.M. a horse fly, several riplings, and many fish. Water luminous at night. Bar. 4 P.M. 29.9¼. 5. 29.9¼. 12½ A.M. 29.9¼. 7. 29.9¼. 8½. 30.0. 9. 30.0. 10½. 30.0.
·31			7.6	8.4	8.1	9.	Very steady.	39	First part, calm. Latter, light breeze from NE. with hazy weather. The land bird aboard still. A.M. several tropic birds. Passed a bamboo adrift. Water luminous at night. Bar. 4 P.M. 29.9¼. 6. 29.9. 14½ A.M. 29.9¼. 8. 29.9¼. 9. 30.0.
								5484	

1775	Th.	Marine Barometer. R.	S.	Th.	D.	Weather and Winds.	D.L. A.O. N	S	D.L. A. T.K. W	E	Longitude from A.	TK.
	°	In.Dec.	In.Dec.	°	In.Dec.		′	′	′	′	° ′ E	° ′ E
Nov. 24	82¼	30.0¼	29.9	82¼	29.9	f. NNE. NE by N. NE. f. NE. r. f. NE by N. f. ſq, r. c. NE.		10	32		90.29	90. 9
25	82	30.0¼	29.9¾	82	29.9¼	c. ſq. NE. V. ſq. c. r. V. E by N. ſq, r. V. ENE. ſq. c. ſq. NE by E. NE.		19	43		90.13	89.10
26	82	30.0¼	29.9¾	81½	29.9¼	ſq, ſr. c. ſq, r. V. NE. V. ſq, r. ſq. c. NE. V. c. V. NE by E. c. ſq. NE. NE by E. V.		8	30		90 19	88.46
27	83½	30.0¼	29.9¾	83½	29.9½	ſq. ſq, r. NE. V. c. L. all round. V. E by N. ſq. h. L. all rd. E. E by N. h. E by N.		3	55		90.48	88.20
28	84½	29.9¼	29.9¼	84½	29.9	c. E by N. c. E by N. ENE. E by N. c. ſq. E by N. E. ſq. c. E by N.	4		20		90.50	88. 2
29	84½	30.0½	30.0	84½	29.9½	ſq, r. c. ſq. V. E. ſq, r. c. V. ENE. c. ENE. c. h. NE by E. ENE. NE by E.	15		13		90.39	87.38

e to The East-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* AL

D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	Longitude from Greenwich TK.	Longitude from Greenwich D. ☽ T.K.	Longitude from Greenwich ☽	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W.	Magnetical South Dip MD.	Magnetical South Dip C.D
′	′	′	′	° ′ E	° ′ E	′ E	° ′ E			′	° ′ N	° ′ N	° ′ E	° ′ E	′ ° E	°	°	°	°
	10	32		90.29	90. 9						1.37	5.19	88.13		0.53*	7. / 6.4	7.2 / 6.6	7.1 / 6.5	8. / 7.4
	19	43		90.13	89.10						2.50	6.13	87. 7			8.2 / 6.2 / 5.6 / 5. / 4.4	8.4 / 6.6 / 6.2 / 5.4 / 5.	8 3 / 6.4 / 6. / 5.2 / 4.6	9.2 / 7.3 / 6.7 / 6.1 / 5.5
	8	30		90 19	88.46						3.23	6.38	86.36			5 4	6.2	5 7	6.6
	3	55		90.48	88.20	79	87. 1	5	⊙	43	3.28	6.40	86. 3			4.2	4.6	4.4	5.3
4		20		90.50	88. 2	142	85.40	6	⊙	38	4.46	8. 2	85.40			3. / 1.6	3.4 / 2.2	3.2 / 2.	4.1 / 2.7
15		13		90.39	87.38	152 / 139 / 160	85. 6 / 85.19 / 84.58	5 / 7 / 6	⊙ / ⊙ / ⊙	37 / 20 / 21	5.57	9.28	85.10			0.4 / 0.2 / 0.0 / ND. / 0.2 / 1.2 / 1.2	1. / 0.6 / 0 4 / 0.2 / ND. / 1.6 / 1.4	0 6 / 0.4 / 0.2 / 0.0 / ND. / 1.4 / 1.3	1.5 / 1.3 / 1.1 / 0.7 / ND. / 0.5 / 0.4

BERCROMBIE, *kept by* ALEXANDER DALRYMPLE, 1775.

Magnetical												
riation.		South Dip										
		Face										
Amp.		E.	W.	MD.	C.D.					ML.	
′ °		°	°	°	°						
E								By estimation.		5484	
						h. m.	N.lat.	Long.			
0.53*	7.	7.2	7.1	8.		11. 0PM	4.39	88.29			
	6.4	6.6	6.5	7.4		9. 0AM	5.21	88.26		73	Moderate breezes, and mostly fair. The land bird aboard still. A.M. saw a ship, the Dudley, Capt. BARRINGTON, from Madrass to the Nicobars and Pegu; the Captain came on board. At 10 saw another ship. Bar. 6 P.M. 29.9. N.B. *Standing to SW.* from 10 A.M. to 1 P.M. *the dipping needle increased in dip, the distance not above 10 miles*
	8.2	8.4	8 3	9.2	Very steady.	1. 0PM	5.17	88.18			
	6.2	6.6	6.4	7.3		9.15	5.23	88.10			
	5.6	6.2	6.	6.7		12.30AM	5.45	88.11		81	Winds from NE. with frequent squalls and rain. The land bird aboard still. 1 P.M. spoke the ship Floyer, from Madrass to Malay Coast, Capt. RICH. Water luminous. Sea bird shaped like plover, grey with upper part of head black, and wings tipped with black. Same bird seems to have been about ship several days. Bar. 5 P.M. 29.9. 6. 29.9. 1 A.M. 29.9½. 8. 30.0. 9. 30.0¼. 11. 30.0¼.
	5.4	6.2	5 7	6.6	Very steady.	9.10	6. 4	87.25			
	5.	5.4	5.2	6.1		0.30 PM					
	4.4	5.	4.6	5.5							
	4.2	4.6	4.4	5.3	Very unsteady.					87	Fresh gales and squally throughout. The land bird aboard still. Sea very luminous. P.M. a small mew came on board. Bar. 2 P.M. 29.9¼. 10. 30.0. 1 A.M. 29.9½. 8. 30.0.
	3.	3.4	3.2	4.1		1. 0AM	7.20	86. 2		64	Winds most Easterly, with squalls and rain. Sent a boat on board a country snow with red colours; she was bound from *Trankebar* to *Acheen*. Sight ☉ not very good. Bar. 4 P.M. 29.9¼. 6. 29.9¼. 12½ A.M. 29.9¾. 8½. 30.0¼.
	1.6	2.2	2.	2.7	Very steady.	0.30 PM	8. 5	85 40		78	Moderate breezes, and mostly cloudy. Bar. 2 P.M. 29.9½. 4. 29.9. 6. 29.9. 12½ A.M. 29.9¼. 8. 29.9¼. 11. 29.9½.
	0.4	1.	0 6	1.5	Very steady, though ship pitching.	6.30	8.20	85.39			
	0.2	0.6	0.4	1.3		9. 0	8.25	85.38			
	0.0	0 4	0.2	1.1		11.10	8.30	85 37			
	ND.				Very steady.						
	0.2	0.2	0.0	0.7		1. 0AM	8.35	85 36		72	Increasing breeze from Eastward, with squally weather and rain. Bar. 3 P.M. 29.8¾. 4. 29.8¾. 6. 29.9. 1 A.M. 29.9. 9. 30.0. 10. 30.0.
		ND.	ND.	ND.	Pretty steady,						
	1.2	1.6	1.4	0.5		9. 0	9.14	85.15.			
	1.2	1.4	1.3	0.4		0.45PM.	Not very steady.			5939	

1775	Th.	Marine Barometer R.	Marine Barometer S.	Marine Barometer Th	Marine Barometer D.	Weather and Winds.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitude A.	Longitude T
	°	In. Dec.	In. Dec.	°	In. Dec.		′	′	′	′	° ′ E	°
Nov. 30	84½	30.2¼	30.0	85	29.9½	c. NE by E. c. ENE. c. h. ENE. NE by E. h. NE by E.	11			5	90.15	87
Dec. 1	78		30.0	77½		h. NE by E. N. NE by N. h. NE by N. NNE. h. c. sq, r. NNE. NE. sq, r. sq, hr. NE. V.			6		90.36	87
2	82½	30.0	29.9½	82	29.9¼	sq, r. r. V. r. c. V. NE. N by E. c. N by E. NE by N. NNE. c. NE by N.		9	5		91.20	88
3	83½	30.0	29.9	83¼	29.9	c. NE by N. NNE. c. NE by N. NE. c. h. NNE. N by E. h. f. N. NNW. N by W.		8		9	92. 4	89
4	83	30.0	29.9½	83¼	29.9	h. NNW. NW. NW by W. V. h. c. f. to nw. V. WNW. c. WNW. V. c. SW. V. SSW.		4		3	92.16	89
5	84	30.0¼	29.9¾	83½	29.9¼	h. SSW. h. SSW. S. h. f. S. V. SE by S. f. SE by S.	2			5	91.58	89
6	83	30.0	30.0	83½	29.9	f. SE. SE by E. f. sq, r. sq, fr. SE by E. E. ENE. V. sq, hr. c. V. C. NE by E. c. E by N.		9	9		91.16	88
7	80½	30.0¾	30.0¼	80½	29.9¾	c. ENE. NE by E. c. NE by E. NE. NE by E. c. NE by E. c. f. NE by E.		12	17		89.26	86
8	81¼	31.0½	31.0	81¼	30.0½	h. ENE. c. f. ENE. NE. f. NE. ENE. f. h. ENE.		12	3		87. 9	83

ne East-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, 1775, *kept by* AL

s.	D. L. A. O. N	D. L. A. O. S	D. L. A. T. K. W	D. L. A. T. K. E	Longitude from Greenwich A.	Longitude from Greenwich T.K.	Longitude from Greenwich D. ☾ T.K.	Longitude from Greenwich ☾	S.	O.	E. D.	Latitude A.	Latitude O.	Cor. Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W.	Magnetical South Dip MD
	′	′	′	′	° ′ E	° ′ E	′ E	° ′ E				° ′ S	° ′ S	° ′ E	° ′ E	° ′ E	°	°	°
	11			5	90.15	87.19						7.13	10.55	84 55			4.	4.4	4.2
N.			6		90.36	87.34						7.24	[11. 1]	85.15			3.6	4.2	4.
		9																	
NE.			5		91.20	88.13						7.17	10.50	85.58			2.2	2.6	2.4
		8		9	92. 4	89. 6	97	87.29	4	*A *F	43	7. 8	10.33	86.49			3.	3.6	3.3
y W. V.		4		3	92.16	89.21	116	87.25	6	*A	12	7.52	11.13	87. 2	1.32*	1.41*	5.4	5.6	5.5
	2			5	91.58	89. 8						8.39	12. 2	86.47	*1.12	*1.22	6.6	7.2	7.
V.		9	9		91.16	88.17	137	86. 0	6	*P	28	9.42	12.56	85.44			7.6	8.2	8.
by E.		12	17		89.26	86.10						11. 0	14. 2	83.45			8.6	9.2	9.
		12	3		87. 9	83.50	188 205	80.42 80.15	5 6	*A *A	36 43	11.27	14 17	81.23			9.2	9.6	9.4

Cor. Long.	Magnetical: Variation Az.	Variation Amp.	South Dip Face E.	South Dip Face W.	MD.	C.D.		ML.	
° ′ E	° ′ E	° ′ E	°	°	°	°		5939	
4 55			4.	4.4	4.2	3.3	Very steady.	79	Moderate breezes, and mostly hazy. Bar. 3 P.M. 29.9½. 5. 29.9¼. 8 A.M. 30.0.
5.15			3.6	4.2	4.	3.1	Pretty steady.	61	Variable winds and weather, with much rain. A.M. a small land bird, probably same we lost some days ago. Bar. 1 P.M. 30.0. 3. 29.9½. 4. 29.9¼. 6. 29.9½. 9¾. 30.0¼. 12¼ A. M. 29.9¾. 7½. 30.0. 8. 30.0¼. 8½. 30.0½.
5.58			2.2	2.6	2.4	1.5	Not steady.	52	First part, squally with rain. Past 6 P.M. weather looked very black and threatening, but the barometer did not fall, and it came to nothing. Middle and latter, moderate. A.M. the same land bird. Bar. 2 P.M. 29.9½. 2½. 29.8¾ 4. 29.9. 6. 29.9. 9¾. 30.0. 12¼ A.M. 29.9¼. 6. 29.9. 7½. 29.9½. 8¾. 29.9¾. 11¼. 29.9¾.
6.49			3.	3.6	3.3	2.4	Not very steady.	47	Decreasing breeze, with pleasant weather. A.M. the same land bird. A small mew about ship. Bar. 2½ P.M. 29.9 4. 29.9. 7. 29.9¼. 12. 29.9¼. 7 A.M. 29.9¼. 7½. 29.9½.
. 2	1.32*	1.41*	5.4	5.6	5.5	4.6	Very steady.	52	Mostly light airs. A.M. the same land bird. Bar. 2 P.M. 29.8¾. 6. 29.8¾. 10. 29.9¼. 12. 29.9¼. 7 A.M. 29.9.
.47	*1.12	*1.22	6.6	7.2	7.	6.1	Very steady.	50	Light breezes. A.M. the same land bird. P.M. a land bird, it flew like an owl. Bar. 3 P.M. 29.9. 4. 29.9¼. 7. 29.9½. 7 A.M. 29.9¾. 11½. 29.9¾.
.44			7.6	8.2	8.	7.1	Pretty steady.	75	First part, moderate breezes. Middle and latter, squally. The same land bird on board. A sand lark on board. Saw a snow standing to N^d: it hoisted English colours. Bar. 4 P.M. 29.9½. 7½. 30.0. 7¾, *in squall*, 29.9¾. 10. 30.0. 12½ A.M. 29.9¼. 12¾, *before hard rain*, 29.9. 29.9¾. 8½. 30.0. 9¼. 30.0.
.45			8.6	9.2	9.	8.1	Pretty steady.	134	Fresh gales, with pleasant weather. The same land bird on board. A mottled bird came on board. Bar. 2½ P.M. 29.9¼. 4. 29.9¼. 6. 29.9¼. 10. 30.0. 8 A.M. 30.0½. 11. 30.0¼.
.23			9.2	9.6	9.4	8.5	Very steady.	135	Fresh breeze throughout. A small land bird aboard. Bar. 2¾ P.M. 29.9½. 4. 30.0. 6. 30.0. 1 A.M. 30.0. 30.0½. 9. 31.0¼.
								6624	

1775	Th.	Marine Barometer. R.	S.	Th.	D.	Weather and Winds.	D.L. A.O. N	S	D.L. A. T.K. W	E	Longitude A.	T.
	°	In.Dec	In.Dec.	°	In.Dec.		′	′	′	′	° ′ E	°
Dec. 9	80		30.1	79½		h. ENE. h. ENE. h. E. h. E. ENE.		22	1		86.18	8
10						f. ENE		6 in 5½ hours.			86.14	
1776 Sept 10	At anchor in Madrass Road, in the Grenville's cuddy (cabbin before the round-house)											
	Ashore, in the fort of the Company's house near the church,											
28	Ditto,											
Oct 3	Ditto,											

By the *latitude* observed at noon, the 9th of December, and the bearings of PULICAT *Flag staff*, we were then from *Fort St. George*,	° ′ 0.13E	° ′ 80.42 Longitude	
Longitude of FORT ST. GEORGE, by *eclipse* of *Jupiter's first satellite*,	80.29	82.56 Longitude	
Longitude of 9th noon, by *map*,	80.42	2.14 Error of T	
Longitude by mean of 52 ☽ *observations*,	80.28		
Difference,	.14		

N. B. There being a very considerable difference in the position of Fort St. George

° ′ ″		Lon
Lat. 13. 8. 0 N.	7th Oct. 1776, A.D. on board the *Swallow* sloop of war { ⊙ merid. alt. ⊙ double alt. } by a *Hadley* made by Bird.	°
13. 8. 0	1761, Rev. Mr. Hirst, many obs. made not long ago with an *excellent quadrant* (vide Ph. Tr. vol. LII. part I. p 396). N.B. It does not clearly appear whether these obs. were made by Mr. Hirst or by some *other person*.	80.2
13. 8. 0.	*Several observations* by Mr. William Nicholson, master of the Elizabeth man of war, p. 48. Remarks and Observations made on a voyage to the East Indies.	80.1
13. 7. 0	Major James Rennell, surveyor-general of Bengal.	80.2
13. 4 54	Major William Stevens, chief engineer of Fort St George.	80.
13. 4 47	Rev. Mr. William Smith, alt. of *, some to Northward, some to Southward.	80.4
By a *survey* which has been made of the *country* from FORT ST. GEORGE to *Allumparva*, *Allumparva* is 17 statute miles, or	14′.36″ W of Fort St. George.	81.
From PONDICHERRY, by M. D'aprés, *Allumparva* is	13. E.	
Fort St. George Eastward of Pondicherry,	27.36	

F

) The Eaſt-Indies, *in the Ship* Grenville, *Capt.* BURNET ABERCROMBIE, *kept by* ALEX

s.	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Longitude from Greenwich A.	TK.	D. ☽ T.K.	☽	S.	O.	E D.	Latitude A.	O.	Cor. Long.	Magnetical Variation. Az.	Amp.	South Dip Face E.	W.	MD
	′	′	′	′	° ′ E	° ′ E	′ E	° ′ E			′	° ′ N	° ′ N	° ′ E	° ′ E	′ ° E	°	°	°
}		22	1		86.18	82.56						11. 9	13.37	80.42			5.6	6.2	5.
		6			86.14							10.47	[13. 9]						
	in $5\frac{1}{2}$ hours.																		
re the round-houſe)													13. 7				5.6	6.6	6.2
													13. 8				5.6	5.6	5 6
																	5.6	6.	5.7
																	5.6	6.	5.7

the } ° ′ 0.13E
rge,
te, 80.29
80.42
80.28
.14

° ′ 80.42 Longitude 9th noon by map.
82.56 Longitude by Time-keeper.

2.14 Error of Time-keeper ſince 18th Sept. in 83 days.

N.B. All the *obſervations* of the *dip* we
with the *needle* ſtanding on the *table* in t
ville's *round-houſe* towards the *ſtarboard ſi*
ſhip, except 2d, 3d, 6th, and 8th of Octob
and 10th and 28th of September, an
October 1776.

nce in the poſition of Fort St. George according to the different obſervers, I have annexed a view of them.

d. alt. } by a *Hadley* made by Bird.
le alt. }
adrant (vide Ph. Tr. vol. LII. part I.
by Mr. Hirſt or by ſome *other perſon.*
zabeth man of war, p. 48. Remarks

hward.
ort St. George.

Long. from Greenwich.

° ′ ″
80.28.45 Hon. Thomas Howe, eclipſe of Jupiter's firſt ſatellite, 5th July 1755.
80.15. 0 A.D. mean of 52 ☽ obſervations, compared together by the Time-keeper, in this Journal.
80.24. 0 A.D. ⊙ and ☽ 7th Oct. 1776, 3 ſights ext. diff. 10′.
80. 2.15 Rev. Mr. Hirſt, *Tranſit of Venus* 1761.
80.41. 0 Rev. Mr. Smith, by Dr. Maſkelyne's calculation, } Em. 27th May 1777.
81. 1.45 Ditto, by Mr. Smith's calculation, }

PONDICHERRY, by M. Le Gentil 1769, is in ° ′ ″ 11.55.42 N. ° ′ ″ 79.52.30 E long. from Greenwich.
27.36

Which places *Fort St. George* in 80.20. 6

Cor. Long.	Magnetical: Variation. Az.	Variation. Amp.	South Dip: Face E.	Face W.	MD.	C.D.		ML.	
° ′	° ′	′ °	°	°	°	°			
E	E	E						6624	9th December. Pleasant gale. At 2½ P.M. had soundings, 28 fath. gravelly sand; and at day-light saw the land bearing SW by W.
80.42			5.6	6.2	5.	5.1	Very steady.	86	
			5.6	6.6	6.2	5.3			
			5.6	5.6	5.6	4.7			
			5.6	6.	5.7	5.			
			5.6	6.	5.7	5.			
								22	
								6732	
							To the *Cape*	8479	
								15,211	

N.B. All the *observations of* the *dip* were taken with the *needle* standing on the *table* in the Grenville's *round-house* towards the *starboard side* of the ship, except 2d, 3d, 6th, and 8th of October 1775; and 10th and 28th of September, and 3d of October 1776.

h	Weather.	Winds.	Course	K.F.	Soundings.
2	h.	E	WSW	1.5	30. no ground.
2½					24. gravelly sand.
3			SbE½E	1.	20. 19. 18. 17. ditto.
4				2.	16½. 18. 17½. 20. ditto.
5			SSE	2.	25. 25½. 26. ditto.
6				2.	25½. 25. blue mud.
7				2.	25½. 26. ditto.
8				2.	26. 27. ditto.
9				2.3	27. 26. 25.
10		ENE		3.	25. 24½.
10½			S	2.2	23. 21. 20. 19. 18½. 18.
11			S by E	2.	18. 17½. 17½. 17.
12			SSE	4.	18. to 25.

At 6h. 30. Armegon Hill, W 13° N 10 or 12 miles off shore. Southernmost part in Pulicat Ridge in *sight*, SW. The extreme in haze.

At 9h. 40. * A Hill or Grove, W 11° S.

R 28.30 Sandy Point of Armegon.
35.16 White Building.
43.38 Ext. in sight to the Northward.
L 4.37 Highest Peak of Pulicat Ridge.
14.25 Kettle Bottom, ditto.
22.40 Ext. in sight to the Southward.

At noon, * PULICAT Flag-staff, S 52° W.
R 33. 6 Kettle Bottom, Pulicat Ridge.
46.30 Highest Peak, ditto.
50. 0 Sandy Point.
L 5. 0 Point to Southward of Pulicat.
19.30 Tust near South ext. in sight.

10th December.

h	Weather.	Winds.	Course.	K.F.	Soundings.
1	f.		S	4.5	27. 23.
2			S by W	4.5	20. 13.

At 5h. 30′. Anchored in Madrass Road in 10½ fath.
* FORT ST. GEORGE Flag staff, S 81° W. about 4 miles off shore.

R 14.31 Obelisk and Punch-house in one.
18.15 Armenian Church.
49.12 White-house on the Sea-beach.
L 18.47 Nabob's White Building.
25. 9 St. Thomas's Mount.
28.40 Triplicane Pagoda.
29. 6 Peak of 4 Sierras.

annexed a view of them.

5th July 1755.
the Time-keeper, in this Journal.

m. 27th May 1777.

° ′ ″
79.52.30 E long. from Greenwich.
27.36

80.20. 6

In the explanation of *weather* dr. denotes *drizling rain*, and a comma (,) after *all* the *weathers*, ſo ſeparated by *comma*, are connected: thus, ſq, r, th, L. in *lightning:* ſq. r. th, L. imply *ſqually*, *rain*, *thunder* and *lightning*, to have al but not at the ſame time.

In the explanation of the 5th column, *for* N denoting that the *obſervation* read *obſervation*.

For	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Long. from Gr. A.	Long. from Gr. TK.	Latitude A.	Latitude O.	R
	′	′	′	′	° E ′	° ′	° ′	° ′	
May 2d, — — — —	–	9	–	–	—	—	—	—	–
4th, — — — — —	–	31	–	–	—	—	—	—	–
8th, — — — —	–	39	–	–	—	—	—	—	–
9th, — — — —	–	11	–	–	—	—	—	—	–
10th, add 4′ to Lat. A till 15th inclusive, and —	–	–	–	–	—	—	39.26	—	–
14th, — — — —	–	20	–	–	—	—	—	—	–
15th, — — — —	–	25	–	–	—	—	—	—	–
18th, in column D. ☽ T.K. *for* W *read* E									
22d, — — — —	–	18	–	–	—	—	—	—	–
27th, ſubtract 10′ from Lat. A till 20th of June inclusive, and	–	–	–	–	—	—	15.32	—	–
June 1ſt, ſubtract 10′ from Long. A to 25th of June inclusive, and	–	–	–	–	16.51	—	—	—	–
5th, — — — —	–	–	–	20	—	—	—	—	–
9th, — — — —	–	–	–	–	—	14. 1	—	—	–
21ſt, ſubtract 11′ from Lat. A till 1ſt July inclusive, and	–	–	–	–	—	—	3.45	—	–
26th, — — — —	21	–	–	–	10. 2	—	—	—	–
27th, — — — —	–	–	–	–	10. 6	—	—	—	–
28th, — — — —	–	–	–	–	11.10	—	—	—	–
29th, add 13′ to Long. A till 2d Auguſt inclusive, and	–	–	–	–	12.18	—	—	—	–
July 2d, — — — —	–	–	–	–	—	—	0.22 S	—	–
3d, — — — —	–	–	–	–	—	—	1. 6	—	–
4th, add 21′ to Lat. A. till 19 Auguſt inclusive, and —	–	–	–	–	—	—	2.13	—	–
24th, add 2′ to Long. T.K. till 28th July inclusive, and	–	–	–	–	—	28.12	—	—	–
28th, — — — —	–	–	9	–	—	—	—	—	–

enotes *drizling rain*, and a comma (,) after any *weather* marked, implies that *comma*, are connected: thus, ſq, r, th, L. imply *ſqually* with *rain*, *thunder* and *ually*, *rain*, *thunder* and *lightning*, to have all been in the period of ſix hours,

nn, *for* N denoting that the *obſervation* read N denoting that the *latitude* by

For	D.L. A.O. N	D.L. A.O. S	D.L. A. T.K. W	D.L. A. T.K. E	Long. from Gr. A.	Long. from Gr. TK.	Latitude A.	Latitude O.	*Read*	D.L. A.O. N	D.L. A.O. S	D.L. A T.K. W	D.L. A T.K. E	Long. from Gr. A.	Long. from Gr. T.K.	Latitude A.	Latitude O.
	′	′	′	′	° E ′	° ′	° ′	° ′		′	′	′	′	° ′	° ′	° ′	° ′
—	–	9	–	–	—	—	—	—	—	9							
—	–	31	–	–	—	—	—	—	—	–	23						
—	–	39	–	–	—	—	—	—	—	–	19						
—	–	11	–	–	—	—	—	—	—	–	10						
—	–	–	–	–	—	—	39.26	—	—	–	–	–	–	—	—	39.30	
—	–	20	–	–	—	—	—	—	—	–	26						
—	–	25	–	–	—	—	—	—	—	–	20						
—	–	18	–	–	—	—	—	—	—	–	16						
nclusive, and	–	–	–	–	—	—	15.32	—	—	–	–	–	–	—	—	15.22	
nclusive, and	–	–	–	–	16.51	—	—	—	—	–	–	–	–	16.41			
—	–	–	–	20	—	—	—	—	—	–	–	–	19				
—	–	–	–	–	—	14. 1	—	—	—	–	–	–	–	—	14 15		
ve, and	–	–	–	–	—	—	3.45	—	—	–	–	–	–	—	—	3.34	
—	21	–	–	–	10. 2	—	—	—	—	18	–	–	–	10.16			
—	–	–	–	–	10. 6	—	—	—	—	–	–	–	–	10.20			
—	–	–	–	–	11.10	—	—	—	—	–	–	–	–	11.24			
and	–	–	–	–	12.18	—	—	—	—	–	–	–	–	12.31			
—	–	–	–	–	—	—	0.22 S	—	—	–	–	–	–	—	—	0.33 S	
—	–	–	–	–	—	—	1. 6	—	—	–	–	–	–	—	—	1.23	
d —	–	–	–	–	—	—	2.13	—	—	–	–	–	–	—	—	2.34	
e, and	–	–	–	–	—	28.12	—	—	—	–	–	–	–	—	28.14		
—	–	–	9	–	—	—	—	—	—	–	–	–	9				

For	D.L. A.O.		D.L. A. T.K		Long. from Gr.		Latitude	
		S	W	E	A.	T.K.	A.	O.
	′	′	′	′	° ′	° ′	° ′	° ′
July 29th, add 6′ to Long. T.K. till 10th August inclusive, and	–	–	3	–	—	27.56	—	31.33
Aug. 3d, add 11′ to Long. A. to 9th August inclusive, and	–	–	–	–	13.56	—	—	—
10th, subtract 11′ from Long. A. till 18 August inclusive; subtract 6′ from Long. T.K. till 12th August inclusive, } and	–	–	–	–	—	2.25	—	—
13th, subtract 4′ from Long. T.K. till 18th August inclusive, and	–	–	–	–	—	7.26	—	—
14th, — — — —	–	16	–	–	—	—	—	—
19th, — — — —	–	–	–	–	—	19. 9	—	—
Sept. 20th, subtract 10′ from Long. A. till 8th Dec. inclusive, and	–	–	–	–	21.26	—	—	—
27th, subtract 20′ from Lat. A. till 16th Oct. inclusive, and	–	–	–	–	—	—	36.40	—
Oct. 17th, subtract 59′ from Lat. A. till 22d inclusive. —	–	–	–	–	—	—	34.57	—
23d, — — — —	–	–	–	–	—	—	29.55	—
24th, subtract 41′ from Lat. A. till 10th of Nov. inclusive, and	–	–	–	–	—	—	29. 4	—
Nov. 5th, — — — —	7	–	–	–	—	—	—	—
9th, — — — —	–	14	–	–	—	—	—	—
11th, subtract 31′ from Lat. A. till 17th inclusive, and —	–	–	–	–	—	—	2. 3	—
18th, — — — —	–	–	–	–	—	—	0. 3	—
19th, — — — —	–	–	–	–	—	—	0. 3	—
20th, — — — —	–	–	–	–	—	—	0.17	—
21st, — — — —	–	–	–	–	—	—	0. 3	—
22d, add 31′ to Lat. A. till 9th Dec. inclusive, and —	–	–	–	–	—	—	N 0. 9	—
Dec. 9th, — — — —	–	–	–	–	86.18	—	—	—
10th, — — — —	–	–	–	–	86.14	—	—	—

For	D.L. A.O.		D.L. A. T.K		Long. from Gr.		Latitude		Read	D.L. A.O.		D.L. A. T.K.		Long. from Gr.		Latitude	
		S	W	E	A.	T.K.	A.	O.		N	S	W	E	A.	T.K.	A.	O.
	′	′	′	′	° ′	° ′	° ′	° ′		′	′	′	′	° ′	° ′	° ′	° ′
nclusive, and	–	–	3	–	—	27.56	—	31.33	—	–	–	–	3	—	28. 2	31. 3	
ıfive, and	–	–	–	–	13.56	—	—	—	—	–	–	–	–	14. 7			
clusive; } and clusive, }	–	–	–	–	—	2.25	—	—	—	–	–	–	–	—	2.19		
inclusive, and	–	–	–	–	—	7.26	—	—	—	–	–	–	–	—	7.22		
—	–	16	–	–	—	—	—	—	—	16							
—	–	–	–	–	—	19. 9	—	—	—	–	–	–	–	—	19. 5		
inclusive, and	–	–	–	–	21.26	—	—	—	—	–	–	–	–	21.16			
clusive, and	–	–	–	–	—	—	36.40	—	—	–	–	–	–	—	—	36.20	
ıfive. —	–	–	–	–	—	—	34.57	—	—	–	–	–	–	—	—	33.58	
—	–	–	–	–	—	—	29.55	—	—	–	–	–	–	—	—	29.17	
inclusive, and	–	–	–	–	—	—	29. 4	—	—	–	–	–	–	—	—	28.23	
—	7	–	–	–	—	—	—	—	—	5							
—	–	14	–	–	—	—	—	—	—	–	4						
e, and —	–	–	–	–	—	—	2. 3	—	—	–	–	–	–	—	—	1.32 N	
—	–	–	–	–	—	—	0. 3	—	—	–	–	–	–	—	—	0.28	
—	–	–	–	–	—	—	0. 3	—	—	–	–	–	–	—	—	0.28	
—	–	–	–	–	—	—	0.17	—	—	–	–	–	–	—	—	0.14	
—	–	–	–	–	—	—	0. 3 N	—	—	–	–	–	–	—	—	0.28	
and —	–	–	–	–	—	—	0. 9	—	—	–	–	–	–	—	—	0.40	
—	–	–	–	–	86.18	—	—	—	—	–	–	–	–	86. 8			
—	–	–	–	–	86.14	—	—	—	—	–	–	–	–	86. 2			

N. B. The ſhip having an iron tiller, and much iron about the after part, it was found, the obſervations tal were not conſiſtent or meriting confidence. From *Anjengo* they were all taken on the binnacle, which ſeem fit place in the ſhip.

1776		Lat.	Long.	Magnetical Variation Az.	Magnetical Variation Amp.	South Dip Face E.	South Dip Face W	South Dip MD.	South Dip C.D.	
		° N,	° E,	° W'	° W'	°	°	°	°	
Oct. 14	Aſhore at *Trinquemalé* on Ceyloan.	8.32	81.30			3 6	3.6	3.6	4.5	
26	At anchor 10 fath. ſand and ſhells, *Anjengo* Road.	8.41	76.54	1.12*	1.13*	3.4	3.4	3 4	4 3	Very ſtea
30		9.58	75. 4			1 6	1.6	1.6	2.5	Pretty ſte
31		9.54	74 24	1. 3*	0.53*	2.1	2.1	2.1	3.	Ditto.
Nov. 1	Off *Kalpeny.* Lacadivé Iſl.	9.57	73.35	1.25*		1.7	1.7	1.7	2.6	Not very
2	Off *Scheulpar.* Lacadivé Iſl.	9 59	72.30			1.5	1.5	1.5	2.4	Pretty ſte
3		9.38	71.18			2.7	2.7	2.7	3.6	Ditto.
4		9 49	70.26	1.30*		3.2	3.2	3.2	4.1	Ditto.
5		9.53	69.11	2 12*	1.54*	3.	3.	3.	3.7	Ditto.
6		9.55	67.35			3.	3.	3.	3 7	Not very
7		10.43	65.30	4. 0* *4. 4	4. 3* *4.18	1.4	1.4	1.4	2.3	Ditto.
8		11.57	63.22	4.23*		ND. 0.4	ND. 0.4	ND. 0 4	0.3	Not ſte when
9		12.45	60.34	5.15* *5.37		3.	3.	3.	ND. 2.1	Very unſt
10		12.59	57.21	6. 0* *7. 4	6. 6*	4.	4.	4.	3.1	Pretty ſte
11		13.29	55.12	7.30* *8.24	7.54*	5	5.	5.	4.1	Ditto.
12	Off *Socotra.*	13.16	52 55	7.57*	8.15*	5 4	5 4	5 4	4.5	Ditto.
13		13.28	50.58	9.20* *8 59	8.58* *9. 0	5 6	6.6	6 2	5 3	Very ſtea
14	In ſight of *Coaſt* of *Arabia.*	13.51	49.37	9 35*	9.32*	7.2	8.6	8.	7.1	Quite ſtea
15	Ditto.	13.37	48.33	9. 1* *8.46	9 30* *9.30	8.	9.	8.4	7.5	Ditto.

of the Dip in His Majesty's Sloop of War The Swallow, *Captain* JOHN ALEXANDER PA

art, it was found, the obſervations taken in the cabbin
re all taken on the binnacle, which ſeemed to be the only

	Magnetical					
	tion	South Dip				
	Amp.	Face E.	Face W	MD.	C.D.	
	° W′	° 3 6	° 3.6	° 3.6	° 4.5	
	1.13*	3.4	3.4	3 4	4 3	Very ſteady.
		1 6	1.6	1.6	2.5	Pretty ſteady.
	0.53*	2.1	2.1	2.1	3.	Ditto.
		1 7	1.7	1.7	2.6	Not very ſteady.
		1.5	1.5	1.5	2.4	Pretty ſteady.
		2.7	2.7	2.7	3.6	Ditto.
		3.2	3.2	3.2	4.1	Ditto.
	1.54*	3.	3.	3.	3.7	Ditto.
		3.	3.	3.	3 7	Not very ſteady.
	4. 3* *4.18	1.4	1.4	1.4	2.3	Ditto.
		ND. 0.4	ND. 0.4	ND 0 4	0.3 ND.	Not ſteady, but taken when moſt at reſt.
		3.	3.	3.	2.1	Very unſteady.
	6. 6*	4.	4.	4.	3.1	Pretty ſteady.
	7.54*	5	5.	5.	4.1	Ditto.
	8.15*	5 4	5 4	5 4	4.5	Ditto.
	8.58* *9. 0	5 6	6.6	6 2	5 3	Very ſteady.
	9.32*	7.2	8.6	8.	7.1	Quite ſteady.
	9 30* *9.30	8.	9.	8.4	7.5	Ditto.

1776		Lat.	Lo
		° ′	°
Nov. 16	In ſight of *Coaſt* of *Arabia.*	12.54	47
17	*Cape Aden* in ſight.	12.41	45
18		12.38	[44
20	At anchor at *Mocha.*	13.22	44
21	Ditto.	13.22	44
	Aſhore at the *Company's factory.*	13.20	44
22	In ſight of *Gebel Zeker.*	14.24	43
23	In ſight of *Gebel Tar.*	15.29	43
24	Ditto.	16. 2	42
25		16.24	42
26		17. 5	41
27		18.14	41
28		19.36	40
29	Off *Judda.*	20 59	39
30		21.43	39
Dec. 1	In ſight of *Coaſt* of *Abyſſinia.*	21 56	37
2		22.44	38
3		22.46	38
4		22.54	37
6	At anchor on *Coaſt* of *Arabia.*	24.16	38
7	Off *Coaſt* of *Arabia.*	24.17	38

	Lat.	Long.	Magnetical Variation Az.	Magnetical Variation Amp.	Magnetical North Dip Face E.	Magnetical North Dip Face W.	Magnetical North Dip MD.	Magnetical North Dip C.D.	
	° ′	° ′	° ′	° ′	°	°	°	°	
f *Coaſt* of *Arabia*.	12.54	47. 4	9.31* *10.38	9.39* *10.35	6.2	7.2	6.6	5.7	Pretty ſteady.
in ſight.	12.41	45.25	*11.25	*11.30	6.2	7.2	6.6	5.7	Ditto.
	12.38	[44. 5]	11. 3* *11.14	11. 5* *11.18	7.2	8.2	7.6	6.7	Ditto.
r at *Mocha*.	13.22	44.10	11.35*	11.22*	8.6	9.6	9.2	8.3	Ditto.
	13.22	44.10		11. 2*	8.4	9.4	9.	8.1	Not ſteady, much wind.
the *Company's factory*.	13.20	44.11			9.2	9.6	9.4	8.5	
f *Gebel Zeker*.	14.24	43.35		11.11*	12.4	12.4	12.4	11.5	Pretty ſteady.
f *Gebel Tar*.	15.29	43.12	13.10* *13.14	12.50*	14.2	14.2	14.2	13 3	Very ſteady.
	16. 2	42.49	14. 3* *12.57	13.53*	15.6	15.6	15.6	14.7	Ditto.
	16.24	42.22	14. 2* *13.31	14.10*	16.6	16.6	16.6	15.7	Ditto.
	17. 5	41 54	13.44*	13.50*	19.1	19.1	19.1	18.2	Ditto.
	18.14	41. 0	13 54*	13.58*	20.6	21.	20.7	20.	Pretty ſteady.
	19.36	40 30	13.12* *12.56	13.19* *12.42	24.2	24.6	24.4	23.5	Ditto.
a.	20 59	39.56	12.52*	12.59*	26.7	26.7	26.7	26.	Ditto.
	21.43	39. 3		12.49*	29.6	29.6	29 6	28.7	Very unſteady, much wind and patching.
f *Coaſt* of *Abyſſinia*.	21 56	37.57				about	30.		Very unſteady.
	22.44	38.24			32.6	32.6	32.6	32.	Not very ſteady.
	22.46	38.11			32.	32.	32.	31.2	Pretty ſteady.
	22.54	37.44			32.4	32.4	32.4	31.6	Not very ſteady.
r on *Coaſt* of *Arabia*.	24.16	38.29			34.6	34.6	34 6	34.	Pretty ſteady.
of *Arabia*.	24.17	38.21	14.52*	15. 0*					

1776		Lat.	Long.	Magnetical Variation Az.	Magnetical Variation Amp.	South Dip Face E.	South Dip Face W.	MD.	C.D.	
		° ′	° ′	°E ′	°E ′	°	°	°	°	
Dec. 8	Aſhore on a *ſmall iſland* on *Coaſt* of *Arabia.*	24.17	38.30			35.	35.	35.	34.2	Much wind.
9	At anchor at *Bareedy.*	24.16½	38.30		14. 1*	35.	35.	35.	34.2	Pretty ſteady.
10					13 50*	35.	35.2	35.1	34.3	Very ſteady.
11		24.16¾	38.30		13.50*	35.	35.	35.	34.2	Not very ſtea deal of wind.
14						35.2	35.2	35.2	34.4	Very ſteady.
15		24.19	38.18			35.	35.	35.	34.2	Not ſteady, ſwell
17		24.25	36.30			35.	36.	35.4	34.6	Much motion, wi
19		25. 4	36.10	*11.48	*11.41	36.2	36.2	36.2	35.4	Pretty ſteady.
20		25.45	36.26	11.30*	11.40*	38.	38.	38.	37.2	Not very ſteady.
21		26. 9	36.11			38.4	38.4	38.4	37.6	Pretty ſteady.
22		26.25	36. 1	12.15*	12. 5* *12.10	38.6	39.	38.7	38.1	Extremely ſteady.
23		26.55	35.38	12.58*	12.46*	39.7	40.7	40.3	39.5	Very ſteady.
25	In ſight of *Ras Mahomet.*	27.36					ab[t]	42.		Very unſteady, m
26		27.47			13.19*					
27		27.58			13.29*					
28		28. 4				42.	42.	42.	41.2	Pretty ſteady.
29	At anchor off *Tor.*	28.16				42.2	42.2	42.2	41.4	Ditto, a little ſwe

Aſtronomical

	Long. from Greenwich. D. ☾ T.K.	☾	O.	S.	E. D.	
	°′	° ′ ″				
Nov. 1	W .22	73.31.30	☉	6	33	*Kalpeny* bearing N.
4		70.26.	☉	5	15	
6	E .30	67. 5.	☉	5	13	
7	W .22	65.52.	☉	4	6	
15	E 1.22	47.11.	☉	6	20	
16	.50	46.14.	☉	5	28	

	Long. from Greenwich. D. ☽ T.K.	☾	O.	S.	E. D.	
	°E	° ′ ″				
Nov. 19		44. 8.18	☉	5	14	A
20		44.16.	☉	5	8	2
21		44. 6.	*A	3	15	
24	.21	42.28.	*A	5	13	
29	1. 9	38.47.	*A	5	33	
Dec. 2	.35	37.49.	☉	7	20	
3	.38	37.34.	☉	5	15	

egister of the Dip in His Majesty's Sloop of War The Swallow, *Captain* JOHN ALEXANDER PAN

Magnetical Variation Az.	Variation Amp.	South Dip Face E.	South Dip Face W.	MD.	C.D.	
° E ′	° E ′	°	°	°	°	
		35.	35.	35.	34.2	Much wind.
	14. 1*	35.	35.	35.	34.2	Pretty steady.
	13 50*	35.	35.2	35.1	34.3	Very steady.
	13.50*	35.	35.	35.	34.2	Not very steady, good deal of wind.
		35.2	35.2	35.2	34.4	Very steady.
		35.	35.	35.	34.2	Not steady, swell from S[d].
		35.	36.	35.4	34.6	Much motion, with wind.
11.48	*11.41	36.2	36.2	36.2	35.4	Pretty steady.
1.30*	11.40*	38.	38.	38.	37.2	Not very steady.
		38.4	38.4	38.4	37.6	Pretty steady.
2.15*	12. 5* *12.10	38.6	39.	38.7	38.1	Extremely steady.
2.58*	12.46*	39.7	40.7	40.3	39.5	Very steady.
			ab[t]	42.		Very unsteady, much wind.
	13.19*					
	13.29*					
		42.	42.	42.	41.2	Pretty steady.
		42.2	42.2	42.2	41.4	Ditto, a little swell.

1777			Lat.	Long.
			° ′	° ′
Jan. 2	At anchor at 5 fath. on *Coast* of *Africa*		29.12	
3			29.35	
4	Off *Suez.*		29.51	32.12
5	At anchor off *Suez.*	N. Lat. obs. 29.58.12	29.58	32.15
6	Ditto.	29.58. 1	29.58	
7	Ditto.			
	Changed the poles, *unmarked end* dips,		–	
	Rechanged the poles, *marked end* dips,		–	–
8	At anchor off *Suez.*	29.58.25	29.58	
9	Ditto.			
10	Ditto.		29.58	
	Suez	29.58.10	30. 2	32.16

Astronomical Observations in The Swallow.

	Long. from Greenwich. D. ☽ T.K.	☾	O.	S.	E. D.	
	° E	° ′ ″				
Nov. 19		44. 8.18	☉	5	14	At anchor in *Mocha Road.*
20		44.16.	☉	5	8	20th. Observed an immersion of 1st sat. of Jupiter with my glass, a good deal of wind and ship not very still,
21		44. 6.	*A	3	15	*Per* watch — — 11. 0.30
24	.21	42.28.	*A	5	13	Watch slower than apparent time 1.52.19
29	1. 9	38.47.	*A	5	33	12.52.49
Dec. 2	.35	37.49.	☉	7	20	Eclipse *per* naut. alm. — 9.56.48
3	.38	37.34.	☉	5	15	2.56. 1 = 44.0.15 (° ′ ″)

Dec. 6	
1777 Jan. 4	{
5	
6	{

llow, *Captain* JOHN ALEXANDER PANTON.

		Lat.	Long.	Magnetical Variation. Az.	Magnetical Variation. Amp.	Magnetical South Dip Face E.	Magnetical South Dip Face W.	Magnetical South Dip MD.	Magnetical South Dip C.D.	
		° ′	° ′	°E ′	′E °	°	°	°	°	
At anchor at 5 fath. on *Coast* of *Africa*		29.12				43.6	44.	43.7	43.2	Fresh wind and good deal of motion.
		29.35			12.50*	46.	46.	46.	45.3	Ditto.
Off *Suez.*		29.51	32.12			45.2	45.6	45.4	44.7	Perfectly steady.
At anchor off *Suez.*	N. Lat. obs. 29.58.12	29.58	32.15			45.6	45.6	45.6	45.1	
Ditto.	29.58. 1	29.58				45.2	45.2	45.2	44.5	Very steady.
Ditto.						45.2	45.2	45.2	44.5	
Changed the poles, *unmarked end* dips,			–	–	–	43.6	43.3	43.4	44.	A little wind.
Rechanged the poles, *marked end* dips,			–	–	–	44 4	44.4	44.4	44.	Ditto.
At anchor off *Suez.*	29.58.25	29.58				44.5	44.5	44.5	44.	Perfectly steady.
Ditto.						45 5	45.7	45.6	45.1	Ditto.
Ditto.		29.58								
Suez	29.58.10	30. 2	32.16							

The Swallow.

.

sion of 1st sat. of Jupiter with my
ind and ship not very still,
— 11. 0.30
n apparent time 1.52.19
12.52.49
lm. — 9.56.48
2.56. 1 = 44°.0′.15″

	Long. from Greenwich. D. ☾ T.K.	☾	O.S.	E.D.	
	°E ′	° ′ ″			
Dec. 6	.29	37 50.	⊙	3 3	
1777 Jan. 4		32.12.	⊙	3 10	Off *Suez.*
		32.11.	⊙	5 10	
5		32.42.	⊙	5 8	At anchor in *Suez Road.*
6		31.47.	⊙	5 14	
		32.21.	⊙	5 24	